

M E D I C A L

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A N D

PHILOSOPHICAL
COMMENTARIES.

By a SOCIETY in EDINBURGH.

Veritatem cum eis ipsis qui docent quaerimus.

SENECA.

VOLUME SECOND.

PART I.

L O N D O N:

Printed for J. MURRAY, No. 32. Fleet-street;
W. CREECH, Successor to Mr KINCAID, and
W. DRUMMOND, *Edinburgh*; and T. EWING,
Capel-street, *Dublin*.

M,DCC,LXXIV.



To the RIGHT HONOURABLE

T H O M A S,

EARL of KINNOUL,

&c. &c.

This VOLUME of the

MEDICAL COMMENTARIES

IS RESPECTFULLY INSCRIBED,

By his LORDSHIP'S

Most obedient Servants,

The AUTHORS.

Non fasces, itaque, non purpuram, non exstructas in altum divitias,
non ingenium artibus atque scientiis utcunque ornatum et imbutum;
sed animum communi utilitati inservientem dignitas sequitur.

NICHOLLS.

P . R E F A C E .

WE may observe, in the words of a celebrated philosopher, that we began this work, ‘ non tam perficiundi spe, quam experiundi voluntate.’ After the trial which it has now had, by the publication of the first volume, it is with pleasure we find, that it has met with no indifferent reception from the public. We are not indeed ignorant, that the success of a new undertaking is often promoted by circumstances unconnected with any merit in the work itself. But we may be bold to affirm, that, if these Commentaries be void of utility, we have been much imposed upon by some of our readers, who could have no motive for flattering us, and who unquestionably are able judges of the real merit of any medical publication.

Thus supported in our labours by the encouragement of the public, and the approbation of individuals, we can have no hesitation in determining to continue them. And we should not at present have troubled our readers with any pre-

face, had we not esteemed it necessary to assign reasons for some part of our future conduct.

Many valuable correspondents, with that freedom which becomes philosophers, have suggested alterations in the plan of these commentaries, which they imagine would be improvements. We are well convinced of the utility of some additions which they propose ; and we are not insensible of the objections which lie against articles that have been admitted. But we cannot help thinking, that our plan is already as extensive as the limits we have assigned for the execution will allow. And we do not imagine that we could substitute any articles of greater utility, in the place of those which we have already adopted. These considerations have determined us to persist, for another volume, in our present plan, reserving every alteration till we shall at least be enabled to judge from the experience of a second year.

There is, however, one particular which we think it necessary to mention thus early, because we have some thoughts of afterwards admitting it. It has been suggested to us, that a register of epidemics in different parts of the kingdom, would constitute a valuable article. After the authority
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of the great Sydenham, it is needless to inculcate the importance of this subject. But it becomes necessary to mention it at present; because, although the register for 1774 cannot be published sooner than in our volume for 1775, yet it must be prepared during the course of the present year. It is therefore a topic on which we would wish to be favoured with the observations of correspondents; and, by what we learn from them, our future conduct shall be regulated.

After these observations on our plan, we shall now conclude this preface with a few reflections of a different nature. In the execution, our aim has been to collect from every source discoveries of real importance. It is not, however, to be imagined, that we have assented to the truth of all the opinions here brought together. Many of them can be confirmed or refuted by the test of future experience alone. We have endeavoured to present them to our readers, with the arguments which we found in support of them, without courting the favour either of the invidious, by virulent censure, or of the vain, by unmerited applause. And while we can acquit ourselves of all partiality and prejudice, we have no reason to

apprehend, that we stand accused by any of our readers.

Many other particulars, besides zeal for the improvement of medicine, and an unbiaſſed regard to truth, are neceſſary for executing this work with all the advantages of which it is capable. But our readers are now poſſeſſed of ſufficient *data*, for determining how far our abilities and induſtry are equal to the taſk we have undertaken. To their judgement we muſt refer the deciſion. But, while we have the ſatiſfaction to reflect, that a favourable opinion has been formed of our firſt volume by ſome, to whoſe learning and abilities great deference is juſtly paid, we hope that we need be leſs diffident concerning the determination of others.

With regard to future volumes, we can only promiſe, that, if abilities be not deficient, induſtry ſhall not be wanting. And we may obſerve, that, for very obvious reaſons, the longer we perſiſt in this undertaking, it will be the leſs difficult to render it extenſively uſeful.

MEDICAL

M E D I C A L
C O M M E N T A R I E S.

S E C T. I.

An Account of Books.

I.

Observations on the Diseases in Long Voyages to hot Countries, and particularly on those which prevail in the East Indies. By John Clark, formerly Surgeon of the Talbot Indiaman. 8vo, London.

THE public has of late been favoured with many judicious observations upon the diseases of warm climates. This subject, however, which must be highly important to such a nation as Great Britain, is by no means exhausted. And the practical remarks with which we are here presented, are no inconsiderable addition to those already made.

Mr

Mr Clark, now Dr Clark, has divided his treatise into two parts. In the first, we are presented with a medical journal of two voyages to the East Indies; and, in the second, with practical observations concerning the prevailing diseases there. As the first of these parts does not admit of abridgement, we shall proceed to take notice of some of the most interesting particulars in the second.

The author classes the diseases which occur in voyages to the East-Indies, under three general heads, derived from their causes. *1st*, Those arising from heat. *2^{dly}*, Those occasioned by heat conjoined with moisture. And, *3^{dly}*, Those occasioned by cold conjoined with moisture. The diseases referred to the first of these divisions, are, he tells us, but inconsiderable, and consist chiefly of slight fevers, admitting of an easy cure. To the second he refers remittent and putrid fevers; And to the last, sea-scurvy.

The diseases which prevail on shore in hot climates, he divides into those of the dry, and those of the wet season. To the first belong fluxes from acrid bile, the cholera, dry belly-ach, inflammations and obstructions of the liver. And to the last, fevers and fluxes, which, he tells us,
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are malignant in proportion to the heat and humidity of the air, and to the noxious exhalations from marshes and uncultivated tracts of country. After this classification of the diseases, he observes, that those in their nature most destructive are, fever, cholera, dry belly-ach, dysentery, hepatitis; and at sea, the scurvy. He then proceeds to treat of particular diseases.

After a full description of the remitting fever, he presents us with some observations on those remedies which have usually been employed in the cure. Bleeding, which, in such fevers, has in general been recommended where there are any signs of plethora, he found, was, even in those cases, attended with a bad effect. He admits the use of antimonials in the beginning of these fevers; but is of opinion, that they are hurtful where the disease is once confirmed, or has arrived at any degree of malignity. Where an antimonial is to be used, he prefers tartar emetic to every other preparation; and recommends that it should be given in the form of a powder mixed with magnesia. To Dr James's powder he objects, that it is not only very uncertain in its operation, but that the profuse evacuations which it occasions render it highly injurious in hot climates.

mates. He is of opinion, that all the advantages which have been ascribed to the saline draughts of Riverius, spiritus mindereri, and nitre, may be obtained from lemonade, or acidulated barley-water. Camphor, serpentaria, musk, castor, sal succini, sal cornu cervi, and the pulvis contrayervae, after propter trial, he was induced entirely to lay aside. He found that blisters were more effectual in relieving the head, that wine was a better cordial, and that warm fomentations and pediluvia were more powerful antispasmodics and diaphoretics.

After these observations on the remedies which have been commonly employed, Dr Clark proceeds to mention the method of cure which he followed. This consisted in cleansing the intestinal canal, by gentle vomits and purges, in prescribing Peruvian bark in as large doses as the patient's stomach would bear, without any regard to remissions or exacerbations, and in directing a diet of the most antiseptic kind, consisting chiefly of vegetables. To confirm these remarks, he subjoins the histories of twenty cases which fell under his care.

After giving a description of the putrid dysentery which reigned at Bengal in 1768, he observes,

serves, that he does not remember to have met with above a case or two which seemed to require bleeding; and that, even in these, the operation, though performed early, did not in the least relieve the patient. For emetics and purgatives, which in this disease are remedies of the greatest consequence, he recommends tartar emetic and the neutral purging salts. For correcting the taste of bitter saline purges, he proposes an addition of cream of tartar, limejuice, or brandy. He is of opinion, that, in the putrid flux of warm climates, calomel is a very improper addition to any purgative. After repeated trials, he alledges, that he has been able to reap very little advantage from ipecacoanha, and that he has frequently tried the extract of logwood and the simarouba as astringents, without any effect. Although the Peruvian bark be not so great a specific in fluxes as in fevers, yet he is of opinion, that it is possessed of virtues far superior to any other astringent; and he tells us, that, in the putrid flux at Bengal, no medicine was attended with more wonderful effects. He recommends the same diet in dysentery, as he had formerly done in fever. But, when the disease has been of long continuance, or the patient

tient in a convalescent state, he advises, that both ripe fruits and vegetable acids be used sparingly, as by their laxative quality they are apt to bring on a return of the disorder. To illustrate the method of treatment which is here proposed, a few cases are subjoined.

Dr Clark next presents us with some observations on the hepatitis, or disease of the liver. Of all the viscera, the liver is most subject to disease in warm climates. As hepatitis sometimes attacks people in perfect health, and at other times is the consequence of preceding sickness, Dr Clark thinks, that it may with propriety be divided into original and symptomatic. After a short account of the symptoms, he observes, that, although in cold climates the cure be in general trusted to plentiful bleeding, antiphlogistic purgatives and blisters; yet, in the East Indies, this method has been found unsuccessful. He tells us, that the most experienced practitioners there prescribe mercury, as an infalible remedy in this disease. With this view, it is both rubbed externally upon the region of the liver, and given internally in such doses as to excite gentle salivation. Our author puts great dependence upon this practice; but he is at the same time of opinion,

nion, that its success has been greatly exaggerated, and that it has often been employed where the disease would have yielded to more gentle remedies.

Six cases only of original hepatitis fell under the author's care: In five of these, mercury was employed with success; and in one, the cure was completed by bleeding, purgatives, and a blister. When the disease of the liver is the consequence of obstinate fevers and fluxes, he is of opinion, that mercury would be improper, and tells us, that every other method of cure will be found ineffectual. In confirmation of this opinion, he narrates three cases, all of which terminated fatally.

He next treats of scurvy. The great hopes of success, entertained from the malt-infusion recommended by the ingenious Dr M'Bride, induced him to give it a fair and candid trial. But, from six cases which are subjoined, it appears, that this remedy had no influence, either in removing the disease, or in checking its progress. He seems to have reaped greater benefit from Dr Silvester's antiscorbutic drink, which is made by boiling three ounces of crude white tartar, four ounces of juniper berries, two drams of ginger

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in powder, one dram of cloves in powder, and five pounds of coarse sugar, in six gallons of water. After boiling half an hour, the whole is poured into a tub, and allowed to ferment. It may be used as soon as the fermentation is begun, from one to three pints daily. He concludes this subject, however, with observing, that, without dry air, dry cloaths, and good nourishment, every medicine for scurvy will be ineffectual.

Rheumatism, which is by no means a common disease of warm climates, sometimes attacks seamen, from sleeping upon deck in night-dews, and at other times is the consequence of remitting fever or dysentery. In the first case, it is in general acute, and, in the last, it is always chronic. When fixed pains in the joints resisted every remedy usually employed in this disease, Dr Clark tells us, that they were totally and expeditiously removed, by rubbing mercurial ointment upon the parts affected, and at the same time giving the common mercurial pill internally. He advises, however, that these medicines be laid aside before they produce salivation, as it in general renders the cure more incomplete.

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In treating of the venereal disease, the author observes, that mercury can be used with much less freedom in warm than in cold climates. He thinks that gonorrhoea may in general be cured without it; and, when it is employed in confirmed pox, he advises, that it never be given in such quantities as to excite salivation. For this reason he directs that it should be begun in small dozes; that the patient be not exposed to the heat of the sun, but kept exceedingly cool; and that neither flannel, nor any covering more than ordinary be put upon his head.

This treatise is concluded with an appendix, containing some observations on sea-provisions; on the regimen of the sick; on the medicine-chest; and on the means of preserving the health of Europeans, upon their arrival at Bengal. He recommends, that the quantity of salted beef allowed to the common seamen should be diminished, and that they should be allowed a sufficient quantity of coarse sugar and tea for breakfast. He advises, that at the Cape of Good Hope, Madeira, Johanna, or Madagascar, where oranges and lemons can be procured at a small expence, a quantity of their juice should be preserved, by adding to it about a fifth part of spirits; and that

an allowance of this liquor should be served out to the ship's company, both at sea, and in those ports of India where vegetables are high-priced.

In the regimen of the sick, he inculcates the necessity of a settled allowance of wine. For other articles of nourishment, he recommends rice, fago, portable soup, and a few of the usual dried fruits.

With regard to the medicine-chest, he observes, that none of the lists which he has perused, contain less than one hundred and fifty articles, many of which are superfluous, and others soon become useless from keeping and a warm climate. He advises, therefore, that many articles, which serve only to increase the expence, should be omitted; and the quantity of others much augmented, particularly of Peruvian bark and Glauber salts. He thinks, that there should be at least forty pounds of the former, and thirty pounds of the latter.

Dr Clark observes, that, of all the English settlements in India, Bengal is the most unhealthy. This, he thinks, is in a great measure to be ascribed to the arrivals happening there, either during the rainy months, or immediately before them.

them. He therefore advises those who mean to settle at Bengal, to pass the months of July, August, and September, on the healthy coast of Coromandel. He advises, that the regiments at Bengal should be recruited with soldiers who have spent at least a twelvemonth at Madras. He concludes with observing, that the most effectual method of preserving the lives of seamen, who must necessarily be stationed every year at Bengal during the sickly season, is by anchoring the ships at Cogeree, which he esteems the most healthy station in the river; and by allowing the men a sufficient quantity of wine, when they are brought low by disease.

II.

Dissertatio medica inauguralis, de Opii Ufu in morbis inflammatoriis, auctore Roberto-Butler Remmet, 8vo, Edinburgi.

AS there are few medicines more useful than opium, so there are few which, when improperly exhibited, are attended with worse consequences. To ascertain, therefore, the diseases,

in which it may be employed with advantage, is undoubtedly an object of the greatest importance.

The author of this dissertation sets out with observing, that its use has been very generally condemned in all inflammatory diseases: But that, in opposition to this general opinion, stands the experience of those eminent men, De Haen, Storck, and Huxham. Instigated by these authorities, he proposes to consider, whether the common prejudice be properly founded or not. In order to determine this question, he first treats of the effects of opium upon the human body in a state of health; and then offers some remarks on its use in inflammatory diseases.

With respect to the effects of opium, he observes, that it at first induces serenity of mind; but dullness, and slowness both of the pulse and respiration soon succeed; then follows a sleep to all appearance natural. He farther alledges, that it diminishes animal heat, and all the secretions and excretions from the body, perspiration excepted, which, on the contrary, it increases. It likewise produces costiveness, and disturbs the functions of the stomach. If it be taken in a large dose, vomiting will often be produced; and

and if this do not happen when the quantity is very great, convulsions, and even death it self, will be the consequence.

Besides the effects above enumerated, which Dr Remmet considers as the only constant ones arising from opium, he allows that, on some occasions, it also induces chearfulness, an increase of the venereal appetite, and an efflorescence on the skin. But these he regards merely as adventitious and secondary symptoms, since they very seldom occur, and, when they do happen, seem only to be consequences from the primary effects mentioned above. The chearfulness and increased venereal appetite, he refers to the serenity of mind; and the efflorescence on the skin, to the increased perspiration.

The effects of opium, he observes, are evident affections of the nervous system, since they must all be referred to the powers of sense and motion. As these are most certainly diminished by opium, he concludes, that all its effects are to be explained from its sedative power. But here a question arises, Whether it acts immediately upon the nervous system, or affects it in a secondary way only, by first rarifying the blood? An argument, in favour of the first supposition, has been drawn from the

disposition which the blood of the Turks has to flow more copiously and readily from a wound, than that of any other nation. This argument, however, the author rejects, because he is of opinion, that this state of the blood, even allowing that it does exist, must be attributed to the vitiated digestion which succeeds the long use of opium, as it never occurs till affections of the alimentary canal have been induced. He concludes, therefore, that this hypothesis is unsupported, and seems fully convinced, that opium acts immediately upon the nervous influence, from the suddenness of its operation. All the effects it exerts are, he observes, frequently produced before it has been half an hour in the stomach. And that they have even been finished before it left that organ, is evident, from an opium-pill being discharged by vomiting, long after its operation had ceased.

The author, after a full consideration of the effects of opium, having thus endeavoured, both from reason and experience, to destroy every idea of its stimulant power, and to prove, that its influence is purely sedative, proceeds, in the second part of his dissertation, to offer some remarks upon its use in inflammatory diseases.

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That he may be better enabled to do so, he sets out with inquiring into the symptoms and causes of inflammation. These induce him to consider an increased action of the vessels, attended with spasm, as the proximate cause of all inflammatory diseases, whether general or topical. But, before he adopts this conclusion, he thinks it necessary to examine the opinion of Boerhaave, who referred inflammation to obstruction proceeding from a lentor of the fluids. This opinion, however, he rejects, since the buffy coat upon the blood, which was considered by Boerhaave as a demonstration of his lentor, scarcely appears in the first days of any disease, and cannot be thought to produce that inflammation which happens in consequence of any mechanical injury. Besides these objections, he adduces the experiments of Mr Hewson, from which it appears, that the buffy coat upon the blood proceeds rather from tenuity than lentor. He farther observes, that obstruction alone is not capable of producing inflammation, since ligatures upon arteries have no such effect; and since it is proved, by the experiments of Dr Haller, that the motion of the blood in the extreme vessels is so slow, that, if they be obstructed, it flows gently

back again to the first anastomosis, by which the circulation is completed.

Having, for these reasons, relinquished the opinion of Boerhaave, he returns to his former supposition, that inflammation depends upon an increased action of the vessels, conjoined with spasm. For the removal of these affections, he thinks that opium is well adapted, as he supposes it to possess a sedative power only, and to diminish all the animal actions; particularly because it diminishes animal heat, renders the pulse slower, and promotes perspiration, which are the changes physicians in general wish to induce, for the removal of inflammatory diseases. He concludes, therefore, that, at least from reasoning *a priori*, good effects may be expected from opium in these complaints.

He next considers, how far this opinion is supported by any other facts than those formerly mentioned from De Haen, Storck, and Huxham. He observes, that Dr Lind gave opium with the best success, even in the hot fit of intermittent fevers, when attended with all the symptoms of inflammation; and that, in measles and haemorrhages, which are both inflammatory affections, Dr Sydenham used it with equal freedom

dom and advantage. From all that has been said, therefore, Dr Remmett concludes, that it is at least probable, that opium is capable of doing great things in inflammatory diseases. He allows, however, that a more certain determination of this point can be obtained only by a cautious repetition of practical observations.

Admitting that opium is proper in inflammatory diseases, there are, however, some particulars which claim attention in its use. This dissertation, therefore, is concluded with some cautions respecting its employment in these. These cautions refer chiefly to its power of restraining excretions.

His first caution is against costiveness, as, by stimulating the system, it will have a tendency to increase inflammation. With this view he recommends clysters, because medicines taken by the mouth may disturb the stomach, which in febrile complaints is frequently weak and irritable, and may interrupt the operation of the opium. This caution, he tells us, is to be observed in all fevers, particularly in those in which either the alimentary canal itself or parts near it are affected with inflammation; because, in these cases, the stimulus of the foeces will be particularly pernicious;

cious ; and clysters will be serviceable by acting as fomentations.

In an inflammation of the bladder, the author cautions us against insensibility of its neck ; because, by this means, the stimulus of the urine may not be perceived, and hence the bladder, from excessive distention, may become incapable of expelling the urine. In such cases, he recommends the use of the catheter, as occasion may require, and the application of relaxant epithems to the os pubis.

In peripneumony and pleurisy, when opiates are employed, besides laxatives, he recommends also the use of expectorants ; because suppressed evacuation is very unfavourable in these diseases, which are seldom removed without a considerable discharge by the lungs.

Doctor Remmet concludes with observing, that opiates do not permanently suppress excretions, although they have that effect for some time. Hence, from that circumstance at least, there is less reason to dread their use in inflammations than might at first be imagined.

III.

On the Digestion of the Stomach after Death. By John Hunter, F. R. S. and Surgeon to St George's Hospital. Vid. *Philosophical Transactions*, Vol. 62. 4to, London.

IN this dissertation we are presented with the account of a singular fact in the animal oeconomy, which throws considerable light on the principles of digestion. Mr Hunter informs us, that there are few dead bodies in which the stomach, at its great end, is not in some degree digested. From this fact he draws several conclusions, which tend to overturn very generally received opinions, with regard to the dissolution of food in the stomach.

The ingenious author of this paper sets out with observing, that an accurate knowledge of the state of the body in health, is the only foundation by which we can properly judge of it in disease. In order to judge accurately of the appearance of dead bodies, it is necessary to consider the changes which they undergo after death:

And

And these, he tells us, have never been sufficiently attended to. By this means, appearances which are natural may be supposed to have arisen from disease, and parts really diseased may be mistaken for the natural state.

Digestion, he observes, can neither be reckoned a process of the living nor of the dead body; because, although its cause arises from life, yet it can be continued after death. It may, therefore, he thinks, be justly esteemed a case of a mixed nature. He observes, that there are many powers in nature, which the living principle cannot enable the animal matter, with which it is conjoined, to resist; but that there are others, against which it is able to preserve the substance it inhabits, and to prevent that dissolution which would otherwise ensue. Of this last kind is digestion. To prove this, he observes that animals, or parts of animals, possessed of the living principle, when taken into the stomach, are not in the least affected by the powers of that viscus. Hence it is that animals of various kinds live in the stomach, or are even hatched and bred there; but, the moment that any of them lose the living principle, they become subject to the digestive power of the stomach.

From

From these observations, Mr Hunter accounts for the appearance mentioned in the beginning of this paper, the dissolution or digestion of the stomach at its great extremity, which he has frequently observed upon dissection. That such an effect really does take place is, says he, sufficiently proved, from comparing the inner surface of the great end of the stomach with any other part of its inner surface.

These appearances, he at first imagined, might be produced during life, and might be the cause of death. But, upon finding that they had no connection with the symptoms of the disease, and that they were chiefly found in those who died suddenly, in consequence of hanging, or other violent causes, he was obliged to desert this supposition. Being, however, employed in a course of experiments concerning digestion, and observing the similarity between the half-dissolved parts of the stomach and half-digested food, he was enabled to account for the phaenomenon in a more satisfactory manner. It occurred to him, that it was to be ascribed to the process of digestion going on after death, as the stomach, then deprived of the living principle, was no longer able to re-

fist

first the power of that menstruum which it had itself formed for the digestion of its contents.

In this opinion he was confirmed, from observing what happens in the stomachs of fishes. All these animals die of violent deaths, and may be said to die in perfect health, with their stomachs in general full. In them the progress of digestion is distinctly marked, as they frequently swallow, without mastication, fish which are larger than the digesting part of their stomachs can contain. In such cases, there are many instances where the part of the swallowed fish, which is lodged in the digesting part of the stomach, is more or less dissolved, while that part which remains in the oesophagus is perfectly sound: And in these cases, as well as in the human body, the digesting part of the stomach is often reduced to the same state as the digested part of the food.

These appearances, Mr Hunter imagines, throw considerable light upon the process of digestion. They show, that it is not effected by a mechanical power, by contractions of the stomach, or heat. They prove, that something, secreted in the coats of the stomach, is thrown into its cavity, and there animalizes the food, or assimilates it to the nature of the blood.

IV.

A Letter from Richard Pulteney, M. D. F. R. S. to William Watson, M. D. F. R. S. concerning the medicinal Effects of a poisonous Plant exhibited instead of Water-parsnep. Vid. Philosophical Transactions, vol. 62. 4to, London.

IN this letter we are presented with an account of very beneficial effects reaped from a plant which has hitherto been very little, if at all, used in the practice of physick. This plant Dr Pulteney supposes to have been the *Oenanthe crocata* of Linnaeus, which is in general known by the English name of Hemlock-dropwort.

The case in which he had an opportunity of becoming acquainted with its use, was that of a man, who, from the age of fifteen till he arrived at forty, was affected with a most violent cutaneous eruption. With a view to remove it, many remedies, prescribed by regular physicians, and not a few of the boasted arcana of empyrics, were employed without any advantage. At length his disorder increased very rapidly. Besides the farther

ther spreading of the eruption, the integuments of his legs thickened much, and the limbs swelled to such a degree as to render him unable to walk. While the quantity of brawny scurf and scales thrown off, was so great, that handfuls of it might have been taken out of his bed every morning.

In this unhappy situation, it was recommended to him to take every morning, when fasting, a table-spoonful of the juice of water-parsnep, mixed with two spoonfuls of white wine: And the person who recommended this remedy procured him about half a pint of what he said was the juice of water-parsnep. The first dose produced such vertigo, sickness, vomiting, cold sweats, and long continued rigour, that it had almost proved fatal. So strong, however, was his desire of relief, that, with the intermission of one day, he repeated it in nearly the same dose. It was followed by the same sickness and vomiting as before, but the succeeding rigour was by no means so violent. He was obliged, therefore, gradually to reduce his dose to about half the quantity he had taken at first.

Before he had taken this juice a month, he was sensible of a very great change for the better; and, by persisting in it for some time longer, his symptoms were almost entirely removed. It
deserves

deserves to be remarked, that this juice never purged him, although, even in its reduced dose, it never failed to occasion vertigo, nausea, and sickness, which were soon relieved, if vomiting supervened. After he had thus far recovered, he desisted from the juice of the plant; but, in its stead, he drank every morning for breakfast an infusion of the leaves. This infusion neither excited nausea nor sickness, but always brought on a slight degree of vertigo. The only sensible operation he could observe from this plant was, that it produced an increased flow of urine, in which there was a copious sediment.

Dr Pulteney concluded, that the plant which was employed in this case could not be the water-parsnep, which is a safe and harmless vegetable. He imagined it probable that the *oenanthe crocata*, which is very common in that part of the country, had been used in its stead. In this suspicion he was confirmed, from getting a specimen of the plant which had been used; and, upon farther inquiry, he found that it was the juice of the root that had been administered, and not of the leaves and stalks.

V.

D. Frid. Aug. Cartheuser, *De acido Salis sedativi Boracis Observatio. Vid. Acta Philosophica Medica Societatis Academicæ Scientiarum Principalis Hassiæ.* 4to, Gieslæ Cattorum.

CHEMISTS in general allow, that we are yet much in the dark with regard to the nature of Borax ; and, indeed, the diversity of opinions which are entertained concerning it, is a sufficient proof of the justice of this assertion. In the paper now before us, Mr Cartheuser sets out with some remarks upon the sentiments of others concerning this salt, and concludes with offering his own opinion upon the subject.

He thinks, that those chemists have erred widely, who, with the celebrated Modell of Petersburgh, have supposed borax to be a refractory alkali ; and that they have come nearer the truth who suppose it a compound of an acid and some other peculiar principle, either earthy or saline. It is, however, he observes, a question as yet by no means determined, to which class of acids that which enters borax is to be referred.

Baron

Baron d'Henoville of Paris has supposed that it is a vitriolic acid; and this conclusion he has endeavoured to support by the two following arguments: 1st, Because the acid, when it enters the composition of the sedative salt prepared from borax, cannot be displaced by any other. And, 2dly, Because, when sedative salt is added to nitre in a state of solution, it expels the nitrous acid in the form of red fumes, and then unites with the remaining alkaline part of the nitre, in the same manner as a concentrated vitriolic acid would do.

On the contrary, the author of this paper endeavours to prove, that the acid of sedative salt is to be esteemed rather of the muriatic than of the vitriolic kind. This opinion he was first inclined to adopt from the following experiment. He put a quantity of very pure sedative salt into a proper glass vessel, which he placed in a moderate sand-heat. As the heat was gentle, it was not vitrified, but was gradually converted into a powder. Upon this powder, while yet warm, he poured some cold water, which dissolved the greatest part of it, a small portion only, of a grayish-coloured earth, falling to the bottom. He observed that,

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during

during the solution, an odour, resembling that of saffron, sensibly arose.

He then separated the gray-coloured earth by filtration, evaporated the clear solution, and subjected to the same process as before the sedative salt which he obtained by this evaporation. This process he repeated till all the salt was converted into a gray-coloured earth; and he particularly remarked, that, upon every solution, an odour, resembling saffron, could be manifestly distinguished. This odour, however, has been considered by all chemists as a certain mark of the presence of muriatic acid, which is proved by the odour which is emitted, when a few drops of Glauber's spirit of salt are added to water. From this experiment, therefore, he concluded, that sedative salt does contain a muriatic acid; and he was still farther confirmed in his opinion by the following experiment.

He divided the grayish-coloured earth, obtained from the solution of the calcined sedative salt, into two equal parts. To the one half he added the vitriolic, and to the other the muriatic acid. The powder was dissolved by both acids without any sensible effervescence. The portion to which the vitriolic acid was added yielded, upon evaporation,

ration, such a selenites as is obtained by the conjunction of that acid with calcareous earths. But the solution with the muriatic acid yielded a salt in every respect resembling sedative salt. The only difference seemed to be, that it was less sharp tasted, and less easily soluble in water. From this regeneration of sedative salt, Mr Cartheuser concludes, that it is unquestionably formed of the muriatic acid, united with a peculiar earth.

Concerning the nature of this earth he observes, that nothing certain can be affirmed. He thinks it improbable that it is a calcareous earth, because the muriatic acid, united with that earth, forms a mass which suffers deliquescence in the open air, and is in other respects very different from sedative salt. Besides this, the want of effervescence, upon the addition of muriatic acid to the earth of borax, is another strong objection to that supposition. He concludes with observing, that an inquiry into the nature of this earth is certainly an object of great importance; because, were it known, sedative salt, and, of course, by the addition of fixed fossile-alkali, borax might be artificially prepared; a discovery which would be no less important to the public, than lucrative to the inventor.

VI.

De Laesione Cranii enormi nona tandem Hebdomade lethifera egit D. Phil. Dav. Busch. Vid. Acta Philosophica-medica Societatis Academicae Scientiarum Principalis Hassiacae. 4to, Gieslae Cattorum.

DAILY experience, as well as the universal consent of surgeons, sufficiently prove, that there are striking peculiarities with regard to wounds of the head. Often it happens, that, where they have all the appearance of being very slight, they suddenly prove fatal. While, on the contrary, the most material injuries will frequently subsist for a very considerable time, without producing great disturbance. Of this the following case is a very remarkable example.

A peasant received a violent blow on the left os bregmatis, by a piece of wood, armed with iron, falling upon his head from a considerable height. He immediately fell to the ground, deprived of all his senses; but, in a short time, he recovered all his faculties, except the use of his right arm and leg. In eight days, nothing remained but a
slight

slight palsy in his hand, and, in a short time after, this also was restored, so that he was able to go about his usual occupation as formerly.

Five weeks after this accident happened, a new set of symptoms occurred. He complained of weakness, loss of appetite, a sense of weight in his head, and was unable to give distinct answers to any questions. These symptoms daily increased; fever supervened; and he died at the end of the ninth week after he had received the blow.

Upon the dissection of his body after death, it was matter of astonishment to every body that any one could live so long, with almost no inconvenience, after his head had suffered such an injury. At the time of the dissection, the wound in the integuments was perfectly cicatrized; but, upon reaching the bone, there appeared a very large fracture, and a depression of about two inches in diameter, near the sagittal future. Under the depression there was found an abscess in the brain, containing about six ounces of pus, and the left anterior ventricle was found filled with turbid serum.

Viewing the suppuration in the brain as the immediate cause of death, the author observes, that it was undoubtedly to be ascribed to the de-

pression, which might have been removed by timely assistance. Hence he concludes, that the absence of threatening symptoms for even a very considerable time is no reason why injuries which can be rectified by the power of art should be neglected.

VII.

De Femore introrsum luxato, ejusque repositione, dissertuit D. Christoph. Ludovicus Nebel. Vid. Acta Philosophico-medica Societatis Academicæ Scientiarum Principalis Hassiacæ. 4to, Gießæ Cat-torum.

THE author of this dissertation sets out with observing, that all who are conversant in surgery agree, that the os femoris is difficultly luxated. Many eminent surgeons have even ventured to assert, that greater force is required to produce luxation here, than to break the bone. There are, however, upon record, instances of such luxations; and our author's own observation has served to convince him of it. In treating of this subject, he first produces some examples of

of it from the writings of others, attempting to assign the reason on which it depends; and then subjoins an account of what he has seen with regard to it, and of the method of cure which he has found most successful.

The instances which he mentions are chiefly taken from the public transactions of Berlin and Gottingen, and from the Edinburgh Essays. After pointing out the difficulties which must be overcome before this bone can be luxated outwards, he observes, that luxation inwards may be much more easily effected. The acetabulum of the os innominatum, which, at that place, is not so high as at any other part of the articulation, is hollowed out; and here the head of the os femoris is confined by a ligament only. Altho', therefore, he had at first adopted the opinion of some others, that fracture would happen here sooner than luxation, yet, from these circumstances, together with what he observed in reality to happen, he was induced to change his opinion.

The first, and principal case, which Mr Nebel here mentions, is that of a robust villager, who accidentally fell over a bridge upon hard stony ground. Upon examining his thigh, which was at first supposed to be fractured, he found it to
be

be an evident luxation. In the reduction, he was obliged to have recourse to more violent extension than is necessary in other luxations. But the extension being made, the head of the bone was easily conducted into the socket, which it entered with a noise loud enough to be heard by all the bystanders. After this, the pains, which had before been intolerable, gradually abated, and the patient in a few days was able to walk with the assistance of a staff.

Another case which he mentions is, that of a lady, who, in consequence of a fall, was affected with violent pain in the inguinal region of the left side. A surgeon who was called to her assistance, suspecting no luxation, trusted the cure to rubbing the part with camphorated spirit of wine. But, as this method did not succeed, Mr Nebel's assistance was asked, about three weeks after the accident happened. Upon examination, he found an evident luxation; the head of the os femoris being lodged in the foramen ovale of the os innominatum. In this case, after trying every method, he found it impossible to introduce the head of the bone fully into the socket, which he suspected to have been by this time filled with some serous coagulum. He concludes, therefore, with

with observing, that, in this case of luxation, it is particularly necessary, that the reduction be speedily attempted.

VIII.

Prolapsus Uteri Incisione curatum enarravit D.I.P. Berchermann. Vid. Acta Philosophico-medica Societatis Academicæ Scientiarum Principalis Hassiæ. 4to, Giesæ Cattozum.

A Practice no less courageous than uncommon, seems to have given rise to the dissertation now before us. A woman of singular fortitude, about fifty years of age, was much afflicted with prolapsus uteri. After trying many remedies in vain, and being tired out with the continuance of her complaint, she at length cut into the substance of the uterus with a common kitchen-knife. A considerable hæmorrhage ensued; after which the uterus gradually contracted, and she had neither a return of the prolapsus, nor was she afflicted with any other symptom. Having boasted of her success, many women in
the

the neighbourhood afflicted with the same complaint, applied for her assistance, and by a similar operation were effectually cured.

In this paper, Mr Berchermann proposes to consider, how far the method of cure mentioned above may be applied to every case of prolapsus, either of the uterus or vagina. The common practice in both cases, he observes, is, first to reduce them, and afterwards to keep them in their place by proper contrivances. These however, in most cases, serve rather to palliate than to remove the complaint, as they must in general be persisted in through life. If, therefore, this method of cure should prove radical, he is of opinion, that it would be a most valuable discovery; and, on that account, he proposes to offer some observations, first, upon the incision of the uterus, and then, upon the scarification of the vagina, when either of them suffer a prolapsus.

He sets out with some observations on the nature of the uterus. Anatomists, he tells us, have demonstrated, that it consists of membranes and fleshy fibres, supplied with numerous vessels. From considering the manner in which it is connected with the neighbouring parts, it would scarce seem credible, that a prolapsus could happen.

Such

Such a disease, however, is well known to occur, not only with married women, but even with virgins. This, he observes, can happen only in consequence of its substance suffering expansion and relaxation. To corroborate which it may be remarked, that the uterus is capable of suffering greater expansion than any other part of the body. It comes, therefore, to be a question, whether, by means of incision, this uncommon laxity happening to the uterus can be corrected?

That, upon an incision of the uterus, such an effect will happen, Mr Berchermann thinks is very evident. The wounded vessels will pour forth their contents, and, by this means, latitude will be afforded for contraction, which will happen both to the blood-vessels and to the substance of the uterus itself, in consequence of the stimulus from the cutting instrument. Nor is there, in his opinion, any reason in this case, to apprehend danger from the wound, as, from the contraction of the uterus, its edges will be closely applied to each other, and the external air will have no access to it. He allows, however, that this method of cure will have no effect when prolapsus happens merely in consequence of laxity in the ligaments, as the diseased part is then out of reach, and will not be affected by a wound given to that which is found.

After

After these observations on prolapsus uteri, strictly so called, the author observes, that the prolapsus vaginae is a much more frequent disease: To determine the propriety of incision in the cure of it, the nature of the vagina must also be considered. Anatomists agree, that it is copiously supplied with blood-vessels; that it is more membranous than the uterus; and, from its numerous nerves, more exquisitely sensible. Taking it for granted, therefore, that, in this case as well as the former, prolapsus proceeds from relaxation, incision will here be useful upon the same principles. And this method of cure he thinks superior to what is in general recommended; because it has a better chance of proving radical.

Having thus considered the advantages which may be supposed to arise from incision, he concludes with some observations tending to shew, that they may with less danger be obtained from scarification. In proof of this, he adduces two cases of hydropic tumours, the one of the praecputium, the other of the nymphae, in which it proved successful. As in these cases it had a good effect, he thinks there can be little doubt that it will be attended with still greater advantage in a disease

disease of a membranous and fleshy part, proceeding intirely from relaxation. This opinion, however, he refers to the determination of these two great criterions which should regulate the judgement of all physicians, Reason and Experience.

IX.

De Rachiticorum Curatione egit D. Carolus Strack, M. D. &c. Vid. Acta Philosophico-medica Societatis Academicæ Scientiarum Principalis Hassiæ. 4to, Gieslæ Cattorum.

THE frequency as well as the obstinacy of the rickets, render it a matter of great importance, that practitioners should be acquainted with a successful method of cure. To deliver such is the intention of the author of this paper. This disease, he tells us, in general begins with children, when they are about sixteen months old. It is seldom observed with children before they be one year old, and seldom attacks them after they pass two: And it is very generally worse

worse where it begins early, than where it begins late.

For effecting a cure, it is, he tells us, a matter of the utmost consequence to be able to distinguish, very early, whether a child will be afflicted with rickets or not. And this he assures us may be determined by the following symptoms; paleness and swelling of the countenance, and in that part of the cheeks which should naturally be red, a yellow colour, approaching to that of sulphur. When that is the case, he directs, that a medicine should be immediately had recourse to, which will retard the further progress of the disease, and remove what has already taken place. For this purpose, he advises, that five grains of the filings of iron, and as much rhubarb, should be rubbed up with ten grains of sugar, and given for a doze every morning fasting, and every evening an hour before supper. But, if considerable looseness should be produced, it will be necessary at first, to persist in the use of one doze only, every day.

After a month's continuance in this course, according to our author, there in general ensues a keen appetite for food, quick digestion, and a copious flow of urine; by means of which, the
fullness

fulness of the face and yellowness of the complexion are by degrees removed, and the natural colour of the countenance, and firmness of the body in general, are gradually restored. This practice, he assures us, has never failed of success in any one instance, not even in those children born of parents greatly afflicted with the rickets.

X.

Medical Consultations on various Diseases, published from the Letters of Thomas Thompson, M. D. Physician to his late Royal Highness Frederick Prince of Wales. 8vo, London.

IN this treatise, we are presented with Dr Thompson's opinion concerning seventy-three cases on which he was consulted; and with the method of treatment which he proposed in each. Without attempting to give a particular account of every one of these, we shall present our readers with some practical remarks from what appear to us to be the most interesting.

VOL. II.

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The first is the case of a lady affected with vomiting, under which she had laboured for several months, throwing up all her food within two or three minutes after eating it. As she was at that time giving suck, Dr Thompson imagined her disease to arise from debility of the stomach, which, he says, is often the consequence of nursing. He directed her to use a vinous infusion of Peruvian bark, to which was added a proportion of steel-wine. By a course of this, in the space of two months, her complaints were entirely removed.

In the 8th, 14th, 15th, 31st, 37th, and 60th consultations, the author gives directions with regard to intermittent fevers. As prophylactics in intermittents, he recommends a dry situation, light nourishing diet, moderate use of wine, the frequent use of the flesh-brush, gentle stomachic purgatives, a glass of tincture of bark every morning especially in damp weather, and daily exercise on horse-back.

In obstinate agues, particularly in quartans, he suspects fixed visceral obstructions. For the removal of these, he recommends calomel, which, he assures us, he has frequently known attended with the best effects.

By

By putting a stop to intermittents prematurely, a variety of symptoms are frequently produced. As these are most easily removed by a return of the paroxysms, he recommends that nature should be imitated as nearly as possible. This, he tells us, may be conveniently done, by making use of the cold bath, and afterwards rubbing the body for some time with a towel.

In the 9th, 22d, and 28th consultations, he treats of obstructed menses. In the first and last of these cases, a variety of symptoms had been induced, in consequence of obstructed menses, such as headachs, pains in the back and belly, spasms, and sometimes convulsions. As both patients were young and plethoric, he recommended bleeding, the use of the pediluvium and semicupium, together with gentle cathartics, and emollient injections with laudanum. From the use of these, the author tells us, that, in many similar cases, he has found the greatest advantages, especially when the disease has been supposed to proceed from a preternatural rigidity of the uterine vessels. In the 22d case, the symptoms induced were of the hysterical kind, and the patient was of a full, but flaccid habit of body. The menses, for five months, had appeared in less

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quantities,

quantities, and at more irregular periods than usual. A course of bitters, and aloetic purgatives were recommended, together with exercise on horse-back, and a proper diet. We are informed, that, soon after this plan was begun, the catamenia returned to their usual course, and all the symptoms disappeared.

The 23d and 72d consultations respect palsy. The first treats of a palsy of the arm, which seemed to be the consequence of the retrocession of an eruption, to which the patient for a considerable time had been subject. In this case, warm stimulating medicines were made use of, together with invigorating cordial medicines inwardly, but with no advantage. At length, however, a cure was brought about, by the application of blisters to the affected part. The other is a case of palsy of the tongue, in a full plethoric habit. There blood-letting was prescribed, with laxative injections, and purgatives inwardly; a blister was applied to the nape of the neck, and the patient was directed to make use of the following medicine, as a gargle: *R. Sem. Sinap. cont. ʒi. Vini alb. lb. i. infunde frigide, et colaturae adde Spt. Lavend. comp. ʒii.* Of the event of this case we are not informed.

In

In the 20th consultation, the author gives his opinion with regard to a periodical efflorescence on the arm of a young girl, which always began to appear about a week before the return of her monthly evacuation, and to disappear in the same manner again as that declined. In this case, astringents and repellents had been recommended; but of these Dr Thompson absolutely forbade the use. As the patient was of a plethoric habit, he advised venesection in the feet. By means of this remedy alone, the complaints were prevented from ever arising to their former height.

The subject of the 36th consultation is a tympany, which seemed to be the consequence of exhibiting Peruvian bark too early in an intermittent fever. This, according to our author, frequently happens, when the bark has been given without premising proper evacuations. A cure was effected by the use of rhubarb as a laxative, and of a powder composed of ginger, nutmeg, and calamus aromaticus, as a carminative. Chalybeat water was afterwards prescribed, in order to prevent a return of the disease.

The 43d case is a leprous eruption of the face, which at first was of a red colour, and afterwards scaled off like bran. The author here

ordered three or four spoonfuls of the juice of fumitory to be taken every day ; and this, he informs us, is a remedy by which many eruptions of that kind have been cured, when mercury, antimonials, and every thing else had failed.

In the 47th and 54th cases, the author gives his opinion with regard to asthma. In the humoral asthma, he recommends squill pills and aloetic purgatives, with a view to prevent costiveness and flatulence. But he is of opinion, that, in the dry spasmodic asthma, all pectorals of the detergent kind do mischief. In place of them, he recommends assa-foetida, with opium, blisters, and the pediluvium, with a view to relieve the present fit. And, in order to prevent a return, he advises the use of the Peruvian bark, chalybeats, exercise, and a strengthening diet.

The 53d case treats of the childbed-fever. This our author considers as a primary disease, and not a secondary one, as some have imagined it to be. He is of opinion, that its principal seat is about the region of the uterus. In order to shorten the rigour with which it is always introduced, he advises the free use of diluting liquors, with gentle diaphoretics. When the hot fit ar-
rives,

rives, he prescribes emollient injections, with a solution of tartar emetic, to cleanse the primæ viæ, upon the proper performance of which, he is of opinion, that the cure in a great measure depends. He likewise advises the saline draughts during the whole course of the disease, with a few grains of rhubarb towards the end. The propriety of blood-letting, he observes, depends entirely upon the symptoms of the case. For, as the disease is sometimes of the inflammatory, sometimes of the putrid kind, the effects of that evacuation must vary accordingly.

The 61st consultation contains a memorial of the means for preventing abortion. He observes, that the causes which in general produce abortion, before the end of the fourth month of pregnancy, are vomitings, longings, and faintings. To remove the first of these, he recommends blood-letting, the saline julep, gentle laxatives, and opiates. He advises, that longings should always be gratified, when it can conveniently be done. And faintings, during pregnancy, are, he tells us, to be treated in the same manner as if they had supervened in any other situation. After the end of the fourth month, abortion is most frequently induced from a continuance of

the vomiting ; a difficulty of breathing ; a violent cough, or floodings. These complaints are chiefly to be relieved by blood-letting and rest ; and, for the cough, may be given spermaceti, honey, infusions of lint-feed, and the like. Costiveness is frequently troublesome in the end of pregnancy, and sometimes not to be overcome even by laxatives. In these cases, he recommends lubricating clysters and blood-letting, with a view to prevent inflammation of the bowels. When, notwithstanding other remedies, floodings continue so violent, that the patient's life comes to be in danger, he advises, that the delivery of the woman be immediately attempted.

In the 73d case, the author gives instructions with regard to vertigo. As the patient about whom he was consulted was plethoric, he directed blood-letting, and afterwards a vomit, and lenient purgatives. He advised likewise a blister to the neck, and cephalic remedies, such as rue, valerian, and peony. He at the same time ordered that the patient should sleep with his head elevated, and that he should abstain from a full invigorating diet.

Observations

XI.

Observations on Epidemic Disorders, with Remarks on Nervous and Malignant Fevers, by James Sims, M. D. 8vo, London.

THE declared intention of this work, as the author informs us in his preface, is to recover the old tract of careful observation, and to induce practitioners diligently to attend to nature in varying the phaenomena of diseases. From this useful path, he apprehends, that the generality of writers, since the days of Sydenham, have widely deviated. Either, running into the regions of fancy, they have entirely lost sight of Nature, and fallen into the errors of artificial arrangement; or allowing themselves to be seduced by the specious appearance of inductive reasoning, they have employed their ingenuity in framing sets of experiments, plausible indeed and amusing, but absolutely fruitless and inapplicable to the purposes of medicine, in the cure of diseases.

In imitation of Sydenham, Dr Sims proposes to describe diseases and their treatment, as they occurred to him in certain seasons; or to delineate particular

particular epidemical constitutions, during the course of which, certain circumstances of connection and similarity appear to have taken place among diseases, which at other times are not so observable and steady.

The work is divided into six chapters. The first, which may be considered as an introductory one, contains a few general remarks on epidemical disorders, together with a short description of the county of Tyrone in Ireland, where the observations here recorded were made. To these is added a brief account of the weather and diseases there from the year 1751, to the end of 1764.

In the four subsequent chapters, we have a particular detail of four remarkable epidemical constitutions, as they occurred to the author, in a course of practice, during a period of about seven years and a half. The disorders which predominated, during the first constitution, were petechial fevers, phrenitis, bilious disorders, hepatitis, small-pox, inflammatory affections of the thoracic viscera, measles, erysipelas, and a fever of a peculiar type.

With regard to the petechial fevers, the author observed with surprise, that they were much less formidable

formidable than he had been taught to imagine. Except the eruption, no alarming symptom ever attended them. And, without either danger or any medical assistance, they generally terminated by a profound sleep, which frequently lasted for many days.

In the phrenitis vera, he found, that early and copious blood-letting was the remedy chiefly to be depended upon; and he recommends opening the temporal artery in preference to venesection. In some cases, however, he was absolutely precluded from having recourse to this evacuation, by observing the patient sink under the loss of ten or twelve ounces of blood, and expire in less than an hour after, although the operation had been indicated by hardness of the pulse, great heat, an inflamed appearance of the eyes, and a violent phrenitic delirium. The only other means of cure which he found admissible, were the liberal use of acids, and the wrapping the lower extremities in flannels wrung out of warm water.

About the end of the year 1766, bilious complaints became frequent. These were preceded by pain in the region of the liver, coldness of the extremities, lowness and inequality of the pulse,
and

and great anxiety. To this set of symptoms succeeded bilious vomiting; after which the pulse rose, the tongue appeared foul, thirst became excessive, and the pain seemed chiefly seated in the stomach. In the cure, the first thing to be done was to obviate the danger of inflammation by blood-letting; and the next to evacuate the bilious colluvies lodged in the stomach and duodenum. This was most properly attempted by the exhibition of mild emetics, unless where the symptoms of inflammation contra-indicated the use of such means. Next to vomits, laxatives of the most gentle and cooling kind were found to give the greatest relief. He observes, that opium, although great caution was necessary in using it while the disease subsisted, might be employed with great advantage, when the morbid cause had been previously removed by necessary evacuations.

In some patients, these bilious complaints terminated in an iliac passion, and, in others, they degenerated into a bilious dysentery. In the former case, the author mentions his having often experienced good effects from the semicupium. But as this, and all other means, very frequently fail of giving relief, he proposes, as a probable method

thod of succeeding in the cure, when the disease is not attended with a strangulation of the intestines, that an attempt should be made to force a profuse sweat, by loading the patient with bed-clothes. In dysenteric cases, he tells us, that he has found surprising benefit from antimonial emetics. Great caution, however, is to be observed in their exhibition, as, in complaints of this nature, they are apt to operate very violently, even when given in the smallest doses.

In hepatitis, which, the author tells us, was best distinguished by an acute pain felt, on pressure, at the pit of the stomach, the only remedies necessary were venesection, and a long continued use of purgatives.

Soon after these bilious complaints, a most malignant species of small-pox began to rage. This disease, according to our author, appeared equally fatal, whether treated by the cool regimen or by the hot: Hence all his ideas, with regard to the efficacy of medicine and regimen in the treatment of this disease, were in danger of being overturned. But after-experience, in a subsequent constitution, removed all his doubts on this head.

The

The small-pox began to decline in spring 1767, and were succeeded by pleurifies and peripneumonies. Copious bleeding was indispensable in the beginning of these diseases. And, notwithstanding the appearance of streaked or purulent expectoration, it was found of advantage in any after period of the disease, when indicated by the urgency of symptoms. When assistance was not asked for, till the circumstances of the patient were such as to render bleeding inadmissible, antimonials were often had recourse to with great success. But, notwithstanding the authority of some eminent practitioners to the contrary, the author contends that there is a great difference among the active antimonial preparations. The two preparations to which he inclines to give the preference are, James's powder, and the kermes mineral. He found blisters to be very serviceable, especially when the pain in the side remained obstinate, after the fever had in some measure subsided. Another remedy from which he tells us that he has observed excellent effects, is common resin given to the quantity of a dram or more in the form of pills.

About the same time that these pleurifies subsisted, children also were very liable to pulmonic
inflam-

inflammations, which, if not speedily relieved by large bleeding, were frequently so violent as to carry them off in a few hours. If bleeding had the effect of mitigating the symptoms, a blister applied to some part of the chest in general completed the cure.

Before the summer-solstice, the measles became very frequent. They were most successfully treated by blood-letting, a cool regimen, and mild purgatives. Erysipelas, which was likewise very common during the spring-seasons of this constitution, required also bleeding and purgatives. It was observed to be most frequent among persons of bilious and scrophulous habits. The epidemic fever of this constitution, like the disorders already mentioned, bore the most evident marks of a prevalent inflammatory diathesis, and accordingly required bleeding, and other antiphlogistic remedies. Miliary eruptions, both of the red and white kind, were very common, and generally preceded a crisis.

In the beginning of autumn 1767, the weather becoming cold and wet, introduced a new set of diseases. At this period, therefore, our author begins his second constitution, which is the subject of the third chapter. Rheumatic affections,
both

both chronic and acute, now became very general, and the former often proved very obstinate. The remedies which Dr Sims found most serviceable in these complaints were, antimonials, particularly James's powder; volatile tincture of guaiac; balsam copoiba; the use of flannel next the skin; sweating the whole body or the parts affected by the vapour-bath, or a hot stove; and the use of mercurials. In the acute kind, he found plentiful bleeding necessary in the beginning, after which, a dose of cooling physic was proper. When, by these means, the fever abated, he had recourse to antimonial sudorifics. Where sweating failed, or was judged improper, he employed the Peruvian bark with great success, although, at first, it seemed to aggravate the symptoms.

Coughs, which were frequent during this season, were seldom, if ever, relieved by blood-letting. The method most successful in removing them was, by confining the patient to bed, and promoting perspiration by the plentiful use of warm weak diluents. A spare diet, consisting chiefly of fops, was most proper at first; but, when the disorder continued long, and the matter expectorated turned thicker, it became necessary to order a change
to

to shell-fish, or light animal food with a little wine.

A fever prevailed at this time, which appeared nearly allied to the acute rheumatism. By bleeding and the antiphlogistic regimen, it was in general brought to a favourable termination. There usually happened a critical sweat about the fourteenth or seventeenth day.

Angina's likewise were common in this constitution. Gentle purgatives, repeated daily, were observed to be productive of better effects than bleeding. But the remedy chiefly to be depended upon was, the use of blisters. Nor was it necessary to apply them immediately to the part affected; they were found to be equally effectual when applied any where in its neighbourhood.

Another disorder of this constitution was the chincough. During the first stage of this distemper bleeding and purgatives were required. Frequent repetition of ipecacuanha vomits was attended with great advantage. And the use of the Peruvian bark, the cold bath, and exercise on horseback, in general, confirmed the cure.

The next disorder which our author remarked was, what he has termed a Hysterical Inflammation.

It attacked females only, and was in general seated in the face; occasioning pain, heat, swelling, and a small degree of fever, without however terminating in suppuration. In this complaint, all external applications seemed to be rather prejudicial, blisters excepted, which never failed to be highly serviceable. In some cases, it appeared probable, that this inflammation attacked the viscera; and one case is narrated, in which it seems to have been seated in the stomach.

The first disorder which occurred in the third constitution was the dysentery. Of this disease, the author mentions two kinds. The one he calls Acute, the other Chronic. The former required venesection, repeated vomits of ipecacuan, and a total abstinence from animal food and wine. The latter was most successfully treated by the continued use of laxatives, intermixed with astringents, bitters, and opiates. In this species also, the use of flannel-shirts was attended with singular benefit, and a generous diet was both allowable and necessary.

The chicken-pox, which prevailed about the same time, demanded little or no assistance from medicine. It was remarkable, that, in some instances, the eruption was considerably retarded
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by purgative medicines and cold regimen. But, by this means, the febrile symptoms appeared to be aggravated.

In spring 1770, consumptions were more frequent than usual. When, in these, there was any suspicion of a venereal taint, mercury alone proved successful: In other cases, the cure turned chiefly on the frequent use of emetics, together with a judicious exhibition of Sulphur and the Peruvian bark. Small bleedings also were often requisite; and it was necessary to pay the greatest attention to the articles of diet and clothing.

This season too brought back the measles and small-pox. No material difference was observable between the measles of this constitution and those of the first. The treatment, therefore, was in every respect the same. The small-pox too appeared to be as malignant now as formerly. But experience fully convinced Dr Sims of the superior advantages of the cold regimen above every other method of combating this fatal distemper.

The author next proceeds to describe the epidemic fever of this constitution. It appears plainly to have been of the low nervous kind, accompanied with a particular affection of the ali-

mentary canal. Gentle laxatives were the medicines which were found to be best adapted to the peculiar genius of this fever. By persisting long in a course of the mildest medicines of this class, the disease was very generally conducted to a favourable termination, without any alarming symptom. Towards the close of this disorder, the Peruvian bark, generous diet, wine, and other cordials, had most excellent effects.

Children, during this constitution, were very liable to a dangerous febrile disorder of the remittent kind. From the affections of the stomach and intestines, with which it was universally attended, it was generally called a Worm Fever. The existence of worms, however, was very seldom ascertained by their being voided. In the treatment of this disease, bleeding was often indicated by the height of the fever : After which the continued exhibition of rhubarb in small doses completed the cure.

Pleurisies and peripneumonies, which had been very frequent during the last constitution, were still to be met with, though more rarely. But an essential difference was now observable in the nature of these complaints. In the former, the liberal use of the lancet was indispensable ; whereas,

as, in the present, even a moderate bleeding, although perhaps useful in the beginning, if repeated, proved highly prejudicial, and sometimes very speedily fatal. Even blisters were not attended with the same good effects as before. So that the cure was trusted entirely to the use of laxatives.

The fourth constitution commences with the spring 1771. A severe cold which then prevailed brought back genuine inflammatory affections of the thorax, which required the same treatment as those of the former constitution.

These were succeeded in the summer by a fever, which raged with unremitting severity through the whole of the subsequent autumn, winter, and spring. It began with languor, want of appetite, nausea, oppression about the praecordia, and violent headach. In a few days, these symptoms were followed by delirium of the low kind, profuse colliquative sweats, subfultus tendinum, and general tremors. Soon after, petechiae, vibices, and other marks of putrescency appeared. In the cure, bleeding, unless in the very beginning, was always detrimental. Bad effects were also observed to follow the exhibition of the ordinary eme-

tics or sudorifics ; and blisters, when applied in the first stages of the disorder, were universally productive of the worst consequences. The medicines which our author found most beneficial were, acids, antimonials, and the Peruvian bark. Great advantages were also derived from the admission of cold air, and the judicious use of wine, especially of claret.

In the end of the spring 1772, Ophthalmia was very common. It did not admit of the use of astringents ; but, in general, soon yielded to emollients applied externally, accompanied with the internal use of laxatives, and nitre. Bilious complaints made their appearance more early in the summer than usual. But the treatment before recommended was found to be successful.

After this history of epidemics, Dr Sims concludes his work with delivering his sentiments concerning the causes and seat of nervous and putrid fevers. He endeavours to shew, from an enumeration of the leading symptoms in these fevers, as delivered by Dr Huxham, and Sir John Pringle, that the opinions of these celebrated writers, concerning the pathology of the diseases in question, are ill-founded, and apt to mislead. He thinks it evident that the primary affection is seated

ed in the stomach and intestines, and rejects the notion of a septic ferment acting upon the whole mass of fluids. In consequence of this idea, his leading indication is, to cleanse the stomach and alimentary canal, by means of antimonials and other evacuants; and afterwards to prevent the regeneration of the morbid cause, by throwing in very large quantities of the Peruvian bark. In this method of treatment, the author places the most implicit confidence. He is even bold enough to assert, that he shall ever fear a physician was in fault, if a person dies of a fever, to whom he has been called, whilst any degree of strength remained, and the patient could be obedient to his directions. Happy would it be for mankind, were this conclusion in no respect too precipitate.

S E C T. II.

Medical Observations.

I.

The History of a Case in which two Foetuses, that had been carried near twenty-one Months, were successfully extracted from the Abdomen by Incision. By Thomas Bell, M. D. of the City of Dublin, communicated to Dr Thomas Young, Professor of Midwifery in the University of Edinburgh.

E Lenor Noon of Grehan, in the county of Mayo, aged twenty-one, after being married fifteen months, had the usual signs of pregnancy. At the expiration of her reckoning, she was seized with labour-pains, which, by her own account, were very violent for some days, and continued near three weeks, gradually becoming more languid,

languid, until they entirely ceased. After this, she perceived no motion in the abdomen. But as her pains abated, her belly increased in bulk, and continued to do so till I saw her, which was in January 1757, about five months after she was first seized with the labour-pains. At this time, the whole abdomen was so much distended, that I imagined she and her friends had mistaken the case, and that it had been an ascites from the beginning. But, upon minute inquiry, I had too much reason to suspect what afterwards appeared to be well founded.

She was emaciated to the greatest degree, and so weak as not to be able to stand, or even to bear being raised, without distress : So that, from every circumstance, I judged it impossible that she could outlive a few weeks, or that any thing could be done to serve her. But, upon going to the same part of the country, about four months after, I found her still living. I was then informed, that, about a month after I had last seen her, all the water had been evacuated from a small rent at the navel ; and had come away in such quantities, and with such violence, that near four gallons were received in a very short time. Mixed with this water, there were some fleshy strings; and, as
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the oozing continued, some small bones came away. This made the case evident beyond dispute; and a situation more distressful cannot be conceived; particularly, as the poor woman was perfectly sensible of it with all its horrors, her understanding not being in the least impaired. She was, if possible, more emaciated than formerly; she had a constant hectic fever, and was so weak as scarcely to have power to speak distinctly. Notwithstanding this, she was very desirous to live, and, what is extraordinary, she did not totally despair of it; a circumstance which I really believe contributed not a little to save her life.

I considered that nature had been sometimes remarkably favourable in cases nearly similar, and resolved to assist its efforts by the application of proper cataplasms, in order to promote suppuration, as the integuments round the aperture were red, and sore to the touch. But my expectations were disappointed; for, in about seven weeks after, she was rather stronger, the charity of the neighbouring gentry enabling her to procure proper diet. Besides this, the opening was so closed, that with difficulty it admitted a small probe; and the redness and soreness were gone.

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From this time, I determined on the extraction of the extraneous bodies by incision, as the only means left for relieving her. On mentioning it to her, she eagerly desired that it should be done, from a conviction of there being no other chance left of saving her life. However, as her situation was so very unpromising as to give little hope of success, I resolved to have the concurrence of more of the profession. I had her accordingly carried to Galway, which was about twenty miles from the place of her residence, by two men, in a covered litter. The fatigue of this journey she bore much better than could have been expected.

On a consultation with Doctors Joyce, Ryan, and Brown, physicians residing in Galway, we agreed upon the necessity of an operation; but, from many discouraging circumstances, could entertain little hopes of success. As the poor woman was still desirous of having it done, I performed it in presence of the above physicians, and of two army-surgeons, Dr Scott and Mr Hopkins, the latter of whom assisted me. I made an incision in the most prominent part of the abdomen, extending about two inches above, and as far below the navel. At this incision I extracted the bones of two full grown foetus's, for little besides
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the bones now remained. They are since deposited in the anatomical theatre of our university.

My patient bore the operation better than could have been expected. No haemorrhage ensued; and she recovered her health so very speedily, as to be able to menstruate in little more than three months. In about three months more, she was prevailed on to cohabit with her husband. She became pregnant in two months after; went to her full time; and had an easy natural labour and healthful child. Since that, she has had six more; and enjoys as great a share of health and strength of constitution as most people.

During the operation, I introduced my hand several times into the abdomen, both that I might extract all the bones and other extraneous matters, and that I might be able to judge whether the foetus's were in the uterus, or in any cyst formed for them. Some of the other gentlemen present did the same. But the weakness of the woman prevented us from making such an examination as would have been sufficient for determining this point with certainty. Most of the gentlemen present imagined the former to have been the case; and indeed, the thickness and firmness of the substance in which the foetus's were

were contained, seemed to corroborate that opinion. But, besides this, the woman still persists in asserting, that the waters came from her in that labour in the natural way, and in the same manner that they have done in several others labours since. This assertion, if true, must put it beyond all doubt that the foetus's were lodged in the uterus, and not in any particular cyst.

II.

The Account of an extra-uterine Foetus, voided by Stool, twenty-two years after Pregnancy. By Thomas Percival, M. D. F. R. S. et S. A.

JULY 1751, Mrs T. of R——, near Mottram, aged twenty-four years, received a sudden fright in the sixth month of her pregnancy, which occasioned a severe pain in her loins, and was soon succeeded by a flooding, but without a miscarriage. These symptoms were relieved by medicines then directed for her by an experienced and judicious surgeon. But her abdomen afterwards became much distended, and continued so for about half-a-year. At the end of that time, it
subsided

subsided all at once, while she lay in a recumbent posture. Soon after her menses appeared again, and returned at the stated periods in sufficient quantity; but they were always attended with violent pain. Milk also flowed from her breasts during several years.

In 1757, she was afflicted with great flatulence, and often with hysterical fits. Her uterine discharges were become very putrid, and her health and strength seemed to be gradually impairing.

She consulted me in May 1772, and received great benefit from an emetic, an infusion of Peruvian bark, and frequent doses of the acid elixir of vitriol. At this time she laboured under the hemorrhoids; complained of great pain in her loins, and about the os sacrum; had frequent flushings in her face; and was much troubled with sickness and thirst. The apothecary had taken eight ounces of blood from the arm, and had given her some aperient medicines. I directed leeches to the hemorrhoidal veins, an electuary composed of the lenitive electuary and flower of sulphur, an infusion of columbo root, and the following clysters, to be injected every night at bed-time.

R. Ol.

R. Ol. e pedib. bov. ꝑiv. Tinct. Theb. v. o.
subact. 3i. M. f. Enema.

May 12. She began this course of medicine.

13. She discharged by the anus two bones
of a child's head.

14. She voided in the same way another
bone of the head.

17. She discharged the trunk of the body,
wanting some of the viscera, of a female foetus.

19. She parted with a thigh-bone.

She was not afterwards sensible of any discharge of this nature; and, on the 7th of June, when I saw her again, her pains were abated, her appetite was improved, and her strength seemed to be daily increasing.

In this state of convalescence she continued two months; and then, from some cause, which the distance of her place of abode has yet prevented me from learning, she suddenly relapsed, and died in a few days.

III.

The Account of an Inflammation of the Abdomen terminating in a gangrenous Sore, from which a large Worm was discharged. By Mr John McLaggan Surgeon at Coaltullach.

UPON the 3d of June 1773, I was called to see a woman who was affected with an inflammation in the lower part of her abdomen. Upon examination, I found that the whole abdomen was much swelled, but the regio umbilicalis was more especially affected. I at first attempted to discuss it; but finding my endeavours in this way ineffectual, I employed the ordinary means to bring it to suppuration. The pain she suffered was so excruciating, that she slept none from the 5th day of the month to the 11th. At that time, the inflamed tumour broke, and discharged upwards of a pound of a thin watery sanies; immediately after which her excrements followed.

Upon the 12th, she was extremely low; her pulse could scarcely be felt; she was affected with cold clammy sweats; her extremities were cold; and there was a considerable discharge from the wound,

wound, which had already begun to mortify. I ordered her wine, and a decoction of Peruvian bark, as she could not take the bark in substance. As these medicines had the effect of relieving her symptoms, they were continued. But afterwards, in removing the mortified parts, I had occasion to cut away a considerable portion of the peritoneum and of the omentum. In doing this, I found a worm, of the teres kind, lying between them. It was about nine inches long, and as thick as an eagle's quill. When I found it, it was alive, and it lived for some time after it was taken out. I concluded that it came from the intestinum ileum, as it was from thence that the foeces issued.

The external wound in the abdomen reached from the left side of the umbilicus to very near the os pubis, on the right side, and it was about two inches in breadth. I washed the edges of the wound with camphorated spirit of wine, and the internal part with a strong decoction of Peruvian bark. This was frequently repeated, and the whole dressed with yellow basilicon.

16th, She was a good deal better, and could take some food. The wine and bark were given in larger doses. The abdomen still continued

much swelled and hard; but, by the use of cataplasms and fomentations, it gradually subsided. The discharge from the gut grew gradually less till the 28th, when it entirely disappeared. The external wound is now healed; and she is at present in as good health as before she was taken ill. She is about sixty years of age, and was sensible of no accident which could give rise to the inflammation.

IV.

Extract of a Letter from Mr Thomas Cochrane Surgeon at Nevis, to Mr John Balfour Surgeon in Edinburgh, concerning the Use of Couhage as an Anthelmintic.

THERE is a medicine which is much used here against worms. Planters give it to the negroes with great success; and I have ordered it myself both to children and adults with very certain good effects. The plant is here called Couhage, and is furnished with the *filiqua hirsuta* of Linnaeus. The parts which are used are, the hairy spiculae scraped from the pods, and mixed with syrup. They are supposed to act, by promoting

promoting the peristaltic motion of the guts, and pricking the worms. The dose is not exactly limited. But the spiculae obtained from a single pod are esteemed a sufficient dose for a child of seven or eight years old.

This remedy is perfectly safe and innocent, although it occasions some uneasiness upon being first taken. I have seen large clusters of worms come away from patients upon the first dose. It is given at bed-time, and a purge in the morning. This practice is repeated after an interval of two days, and it is seldom necessary to give more than a second dose.

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Our readers may remember, that couhage has been mentioned as an anthelmintic by the learned Dr M'Bride, in his introduction to the theory and practice of physic, and by some other authors. But we have seen no description of the plant. There is a good specimen of it at present growing in the botanic garden at Edinburgh. It has been but lately brought there, and is not in that state which is most favourable for investigation. We cannot therefore, at present, give such a description of it as could be of any use.

V.

A Cataract in the Eye, with a praeternatural Membrane attached to the Iris, extracted. By Mr George Borthwick Student of Physic at Edinburgh.

A man, aged 72, about eighteen years ago, was seized with a gradual loss of sight in the left eye; and in the space of a few months he became totally blind in it. About ten years afterwards, the right eye began to be affected in a similar manner. But the affection in this eye never rose to such a height that he could not by means of it distinguish light from darkness; and its pupil always retained a small degree of contraction, of which that of the left was entirely deprived.

He was desirous of submitting to any operation which had the least chance of doing him any service. Accordingly, in presence of Dr Gahn, Messrs Fau, M'Lellan, Riddell, and Manuel, I extracted the chrySTALLINE lens from his left eye. The lens when extracted, was quite opaque. I then shut his eyelids, which I kept in that state for the space of a fortnight, dressing the eye once

every

every day. At the end of this time, I desired him to open his eye-lids. He then perceived the light, and enjoyed such a degree of sight as to be able to walk about.

In this way he continued for about two months. But his sight then began to grow more dim, and, in a few days after, he became as blind as before the operation. Upon examining his eye, I found that the cornea was quite pellucid, and the iris found, but that the chrystalline capsule was perfectly opaque, which gave his eye the same appearance which it had before the operation.

The patient had still his right eye in reserve, and, as the affection in it had neither been of so long standing nor in so high a degree, there was reason to expect greater success from the operation. From this eye, therefore, I extracted the chrystalline lens in presence of my friend Mr Dodds, about four months after I had operated upon the left. This operation was attended with some particular phaenomena which deserve notice. After I had made the incision in the cornea, upon using gentle pressure to bring the lens forwards, it did not present. I then endeavoured, by means of the golden needle of de Wensel, to tear the capsule ; But I found it impossible to in-

troduce it, as there was a praeternatural membrane attached to the whole circumference of the circular fibres of the iris.

This membrane entirely filled up the pupil, through which the needle should have gone. I could easily distinguish this membrane from the circular fibres of the iris, as it was of a different colour. I made, therefore, a small puncture in it on one side, where it joined with the iris. At this puncture, the aqueous humour of the posterior chamber began to issue. In proportion as it came away, the praeternatural membrane was gradually detached from the circular fibres of the iris, and at length was entirely discharged from the eye. This being over, the crystalline capsule appeared. It required some time to cut it with the end of the needle. This, however, was at length executed; and, by gentle pressure, the lens, which was large and opaque, was then extracted. The patient instantly perceived a very great light. His eye was then dressed up; but every day, when the dressings are removed, although his eye-lids continue shut, he can perceive a great degree of light. I have, therefore, I think, great reason to hope, that, in this instance, the operation will be attended with the desired success.

S E C T.

S E C T. III.

Medical News.



THE following account of the celebrated Albinus is extracted from the Leipzig commentaries, volume 17. part 3.

Bernhard Seigfred Albinus was born of an illustrious family at Francfort on the Oder, on the 24th of February 1697. His father was, at that time, professor of the practice of medicine in the university there; but, in the year 1702, he repaired to Leyden, being nominated professor of anatomy and surgery in that university. Here his son had an opportunity of studying under the most eminent masters in Europe, who, from the singular abilities which he then displayed, had no

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difficulty

difficulty in prognosticating his future eminence. But, while he was distinguished in every branch of literature, his attention was particularly turned to anatomy and surgery. His peculiar attachment to these branches of knowledge gained him the intimate friendship of Ruysch and Rau, who at that time flourished in Leyden. Both of them bestowed peculiar attention upon young Albinus; and the latter, so justly celebrated as a lithotomist, is said to have seldom performed a capital operation without inviting him to be present.

Having finished his studies at Leyden, he went to Paris, where he attended the lectures of Duverney, Vaillant, and other celebrated professors. But he had scarce spent a year there, when he was invited, by the curators of the university of Leyden, to be a lecturer in anatomy and surgery at that place. Though contrary to his own inclination, he complied with their request, and upon that occasion was created Dr of Physic, without any examination. Soon after, upon the death of his father, he was appointed to succeed him as professor of anatomy; and, upon being admitted into that office on the 9th of November 1721, he delivered an oration, *De vera via ad fabricae humani*

mani corporis cognitionem ducente, which was heard with universal approbation.

In the capacity of a professor, he not only bestowed the greatest attention upon the instruction of the youth intrusted to his care, but in the improvement of the medical art. With this view, he published many important discoveries of his own, and, by elegant editions, turned the attention of physicians to works of merit, which might otherwise have been neglected. By these means, his fame was soon extended over Europe; and the societies of London, Petersburg, and Harlem, cheerfully received him as an associate.

In 1745, he was appointed professor of the practice of medicine at Leyden, and was succeeded in the anatomical chair by his brother Frid. Bern. Albinus. He was twice rector of the university, and as often he refused that high honour when it was voluntarily offered him. At length, worn out by long service, and intense study, he died on the 9th of September 1770, in the 74th year of his age. His death was regretted not only by the university of Leyden, where he officiated as a professor for near fifty years, but by every sincere admirer of learning and genius. Besides the fame which he justly acquired by his own writings,

writings, the elegant editions which he published of the works of Vesalius, Fabricius ab Aquapendente, Harvey, and Eustachius, will do him perpetual honour.

A gentleman of extensive property in the island Granada, in a letter to Dr Joseph Black physician in Edinburgh, gives the following account of a method which has been successfully practised on his estate for the cure of the yaws. When he returned to that island, after being absent for a considerable time, he found in the hospital thirty-two slaves affected with the yaws. Some of them had been there for years. And a few, who, from time to time, had been dismissed as cured, generally returned after a very short interval. The medicines chiefly employed were mercurial preparations, by the use of which, many negroes had their constitutions broken, some of them being affected with constant pains in their bones, others falling victims to a terrible disorder, in that country, called *Mal d'Estomac*, in which the patient has a violent inclination to eat clay.

These observations determined him to commit some of those affected with this disorder to the care of a negroe who understood the method of treatment in their own country. Having found one
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who lived many years upon the estate, he put two of them under his care, and advised the surgeon to treat four others upon the same plan with the negroe, but with different medicines. The negroe's method of treating them was as follows: He put them twice a-day into a cask, in which there was a little fire in a pot. By this means he sweated them profusely. He gave them decoctions of two woods, which, in that country, are called *Bois Royale* and *Bois Fer*, both of which are said to be sudorific; and he applied to their sores an ointment made of rust of iron and lime-juice. The surgeon treated his four with diaphoretic antimony, and other sweating medicines. He applied to their sores *sacharum saturni*, green vitriol, butter of antimony, corrosive sublimate, and other caustics. The event was, that the two patients entrusted to the care of the negroe were well in a fortnight; but not one of the four treated by the surgeon was apparently better.

He then gave the negroe four other patients, who, as well as the former, were cured in a short time. Upon this, he gave him the charge of all the yawed negroes in the hospital; and, at the end of two months, at which time his letter was written, there were but thirteen remaining uncured;

uncured ; of these, not above three or four had any appearance of yaws ; and two of them came in only a few days before the date of his letter. The rest were affected with pains in their bones, which the negroe alledged was owing to the mercury they had taken before they were put under his care.

Mr Thomas Henry, apothecary at Manchester, has, some months ago, published an appendix to his experiments and observations on the preparation of magnesia. In this appendix, he alledges, that the medicine now sold under the title of *Glass's Magnesia* is much inferior in quality to what it was some years ago ; that it is impure, calcareous, and improper for the purpose of calcining. As calcareous magnesia is neither so absorbent, nor so purgative as the pure, these circumstances, undoubtedly, deserve the attention of those who are in use to prescribe *Glass's Magnesia*.

The college of physicians at Lyons have proposed, as the subject of their prize-dissertation, for the year 1774, the following questions : ‘ *Quelles sont les differentes espèces de dartres ? Quels en sont les differens principes ? Quels sont les moyens de les distinguer ? Quelles sont les maladies internes* que

que les vices dartreux produissent? A quels symptomes peut on les reconnoître? Comment peut on combattre ces differens principes dans leurs differens états? The prize is a gold medal of seventy-two livres in value; and two hundred and twenty-eight livres in cash. All the memoirs on this subject are desired to be transmitted, post paid, before the first of April 1774, a M. Rast, fils, Docteur en medecine de Montpellier, professeur agrégé au collège des médecins de Lyon, place des Terraux.

The royal academy of surgery at Paris have again proposed, for their prize for 1774, the following subject. Exposer les inconveniens qui resultent de l'abus des onguens et des emplâtres; et de quelle reforme la pratique vulgaire est susceptible, a cet egard, dans le traitement des ulcères.

The royal academy of sciences at Paris have proposed the following subject for their prize-dissertation for the year 1775. Quelle est la meilleure maniere de fabriquer les Aiguilles aimantées, de les suspendre, de s'assurer qu'elles sont dans le vrai méridien magnetique; enfin, de rendre raison de leur variations diurnes regulieres? Memoirs on this subject must be transmitted to the secreta-

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ry of the academy before the first of September 1774. The prize is two thousand livres.

Some gentlemen at London have lately printed a proposal for founding a medical library, and instituting a society to be called the Medical Society of London. A fund is proposed to be raised for the purchasing of books, by an annual subscription of one guinea from each member of the society. And two meetings are to be held every month for conversation on medical subjects. It is likewise said to be a resolution of the society, that a gold medal of ten guineas value be given annually to the person who shall present the best dissertation on a question previously proposed. They intend also to collect papers for publication, which are to be carefully preserved till matter sufficient for a volume can be obtained. All papers relating to medical subjects, which are intended to be communicated to the public by this channel, are desired to be directed to the Secretary of the Medical Society of London. The following gentlemen are, we are informed, the present officers of this society, Dr Millar president, Dr Lettsome treasurer, Dr Hulme librarian, and Mr Ford secretary.

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An account has lately been printed of the general dispensary, for the relief of the poor, which was instituted in the year 1770, and is kept in Aldersgate-street London. The design of this institution is, to afford medicines and advice to the poor, either at the dispensary, or, when circumstances require it, at their own habitations. From the printed account, it appears, that, between the 23d of July 1770, and the 9th of June 1773, the number admitted to the advantages of this charity amounted to 3348. The charges are defrayed by annual subscriptions, which are received by many of the principal bankers in London. A scheme in its nature so humane and so important to society well deserves imitation in every large city.

We have seen the history of a case of that disorder of the breast described by Dr Heberden in the second volume of the Medical Transactions, and there named the angina pectoris. The patient died suddenly, from a quantity of purulent matter breaking into the trachea, and thus producing suffocation. Upon dissection, a collection of what appeared to be pus was found between the two membranes which compose the mediastinum. Dr Haygarth of Chester, who relates this case, desires those who have an opportunity of opening bodies,
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that have died of this disease, to examine particularly the mediastinum, which, being a part in no respect essential to life, he fears might not be suspected to contain the cause of death.

Some observations were formerly given, concerning the effects of cabbage-tree bark, as an anthelmintic, in the first volume of these Commentaries, p. 328. and seq. Since that time, Dr Donald Monro at London, in a private letter to Dr Duncan, has mentioned some particulars concerning the operation of this medicine, which are different from what had been observed at Edinburgh. At the desire of Dr Duncan, Dr Monro has consented that these should be made public; and has also communicated some information, which he received several years ago concerning this bark, from Mr M'Donald, who was then a surgeon in the island of Jamaica, but is since dead.

Mr M'Donald's information was, that the negroes or nurses, to whom, in general, the exhibition of this bark is entrusted, commonly prepare it, by taking a handful of it bruised, and boiling it in water, till the decoction attains the colour of porter. Of this decoction, well sweetened, they give, for three successive mornings, a small table-spoonful to a child of two years of age, fasting; and

and they increase the dose according to the age and strength of the patient. After thus giving it for three mornings, they generally purge it off with a dose of the agna castor oil. The first, and most commonly the second dose, cause a nausea, if not a vomiting or purging; on which account the physical people advise giving two, three, or four drops of laudanum with each dose, and seldom desire that any purgative should be given after its use. In both the one and the other way, it rarely fails of procuring the desired effect, and no disagreeable consequences were ever observed to have followed its use. Mr M'Donald added, that two drams of this bark boiled in half a pound of water to two ounces would be found to be a proper proportion.

A considerable quantity of the cabbage-tree-bark was sent to Dr Donald Monro from the West-Indies, which he gave to the apothecary at St George's hospital. Since that time, some of the other physicians to the hospital, as well as himself, have frequently employed it as an anthelmintic. An ounce of the bark was boiled in a quart of water to half a pint; and of this decoction they gave four table-spoonfuls for a dose to a grown person. When exhibited in this manner,

it neither vomited nor purged ; but all those who took it complained of its being a very powerful diuretic, and they called it a forcing one. As an anthelmintic, Dr Monro has found it answer to his wishes in several worm-cases.

Dr Jean Marie Gamet, formerly physician at Lyons, now at Paris, pretends that he has discovered an effectual remedy for all cancerous diseases. With a view of communicating to the public the extraordinary virtues of this medicine, he has lately written a treatise, in two volumes octavo, entitled, ‘ *Théorie nouvelle sur les maladies can-
‘ cereuses, nerveuses, et autres affections du
‘ meme genre, avec les observations pratiques
‘ sur les effets de leur remede approprié.*’ The first volume is taken up with an account of the nature of those diseases for which his remedy is said to be adapted. In the second, he presents us with the history of above sixty cases, in which, he alledges, he has performed cures by means of it. To this volume he has subjoined a petition, by several physicians in Paris, recommending it to his Most Christian Majesty to purchase this secret for the benefit of the public.

Mr Oth. Guil. Struve, in a treatise lately published at Lausanne, entitled, ‘ *Essais, ou Reflex-
‘ tions*

'tions interessantes, relatives a la chymie, la médecine, l'économie, et le commerce,' alledges, that he has discovered two new specifics, the one for epilepsy, and the other for scrophula.

On Sunday the 17th of October died at Edinburgh Mr James Ruffel, surgeon in that city, and professor of natural philosophy in the university: A man justly esteemed for attention and judgment in the exercise of the healing art, and deservedly eminent for great originality of genius, and profound knowledge in philosophy.

On Sunday the 28th of November died also at Edinburgh, Dr Adam Austin, fellow of the royal college of physicians there; an eminent practitioner in medicine, and a man of real worth.

At the annual election by the royal society of London, on Tuesday the 30th of November, the following gentlemen were chosen officers for the ensuing year:

Sir John Pringle, President.

Samuel Wegg, Esq; Treasurer.

Matthew Matty, M. D.

Samuel Horsley, L. L. B.

} Secretaries.

At the annual election by the royal college of physicians in Edinburgh, on Thursday the 2d of

G 2

December,

December, the following gentlemen were chosen officers for the ensuing year :

Dr Cullen, President.

Dr Grant, }
Dr Hope, } Censors.

Dr Monro, Secretary.

Dr Gardiner, Librarian.

Dr Hay, Treasurer.

Dr Duncan, Fiscal.

At the above meeting, it was unanimously agreed, That diploma's for honorary fellowships in the royal college of physicians at Edinburgh should be presented to his Grace Henry Duke of Buccleugh, and to Hieronymus David Gaubius, M. D. professor of medicine at Leiden.

The university of Oxford has conferred the degree of Batchlor in Medicine on Mr Martin Wall.

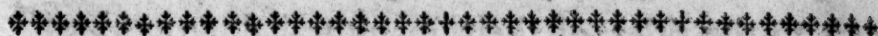
The university of Cambridge has conferred the degree of Doctor of Medicine on Messrs Reynolds and Wright, and that of Batchelor in Medicine on Mr Hunt.

The university of St Andrew's has conferred the degree of Doctor in Medicine on Messrs Marshall, Chisholm, Scott, Spens, Clark, Cameron, and Veale.

It was our intention to have inserted also the names of those gentlemen who obtained degrees in medicine, during the course of last year, at Dublin, Aberdeen, and Glasgow ; but lists of the graduates in medicine at these places we have not been able to obtain soon enough for insertion in this number. For the names of the gentlemen who have obtained degrees in medicine at Edinburgh, during the year 1773, we refer our readers to the titles of their inaugural dissertations, which they will find in the third and fourth parts of our first volume,

The royal society of London have conferred their annual gold medal on Joseph Priestly, L.L.D. for his ingenious and useful observations on different kinds of air, published in the 62d volume of the Philosophical Transactions. An abridgement of that paper is prepared for our next number.

S E C T. IV.

A List of New Books.

Observationes de antimonio ejusque usu in morbis curandis. Auctore Gulielmo Saunders, M. D. et Noscomii, a Thoma Guy armigero instituti, medico. 12mo, London,

The young surgeon's dictionary, or pupil's instructor, wherein their terms are explained from the best Greek authors, and an introduction to anatomy, by inserting the definition of the structure of man. To which is prefixed, instructions to young chemists, and a catalogue of drugs, chemical and galenical, in Latin and English, with a table of all the characters used in surgery and physic. 12mo, London.

Méthode

Méthode pour élever et conserver les enfans en bonne santé depuis leur naissance jusqu'à l'âge de raison ; avec quelques réflexions sur la maniere que l'on a adoptée de les rendre robustes ; les moyens de reconnoître les descentes dont les enfans, les hommes, et les femmes sont affligés ; la maniere de les traiter ; quelques remarques sur les descentes étranglées, et les instructions nécessaires pour remédier à ces terribles accidens. Par M. Blakay, reçu expert au college royal de chirurgie et enterpreneur de la fourniture des bandages aux hôpitaux militaires. 12mo, Paris.

Traité de chymie, par M. de Lorme, gentilhomme ordinaire de sa Majesté, chevalier de l'ordre royal et militaire de St Louis. 8vo, Paris.

Observationes chymicae et mineralogicae, pars 2da, auctore Christ. Ehrenf. Wiegel, M. D. Gripfwald.

Kurtz anleitung insecten zu sammeln : i. e. Short directions for collecting insects, by Augustus-Christian Kuhu, M. D. 8vo, Eisenach.

Beschreibung der Gesund-Brunnen und baden die Hof-Giesmer ; i. e. A description of the mineral-waters and baths at Hof-Giesmar, by Ch. Henry Botger, M. D. &c. Cassel.

G 4 F. J.

F. J. Arands abhandlung von drey krankheiten, &c. i. e. A treatise on three epidemical diseases which raged in 1771 and 1772, with the method of cure, by Frederick James Arand, M. D. &c. Gottingen.

Send-Schreiben, &c. i. e. A letter on inoculation, addrested to Dr Stork, by M. Schinz, M. D. Zurich.

De' fenomeni della circolazione, &c. i. e. Observations on the circulation considered through the whole course of the vessels ; on the motion of the blood, independent of the action of the heart ; and on the pulsation of the arteries. Modena.

Rudimenta pyritologiae methodicae, auctore C. G. Selle, M. D.

Memoires pour servir a l'histoire des insectes. Par Charles de Geer, marechal de la cour, et chevalier de l'ordre royal de l'etoile du Nord, membre de l'académie et de la societé royales des sciences de Suede, et correspondant de l'académie royale des sciences de Paris, 3 tomes. 4to, Stockholm,

Tableau chronologique des ouvrages et des principales découvertes d'anatomie et de chirurgie, par ordre de matière, pour servir de table et de supplement à l'histoire de ces deux sciences, faisant
le

le tome 6me et dernier de l'ouvrage, par M. Portal. Paris.

Detail des succes de l'etablissement que la ville de Paris a fait en faveur des personnes noyées. On y a joint une notice chronologique des differens ouvrages publiés sur cette matiere depuis 1700. Par M. Pia. 8vo. Paris.

An experimental inquiry into the figure and composition of the red particles of the blood, commonly called the red globules, being a copy of a paper lately read before the royal society, by William Hewson, F. R. S. and teacher of anatomy. 8vo. London.

The practice of the British and French hospitals. Containing a select body of useful and elegant medicines, for the several disorders incident to the human body, with practical remarks on each prescription. Calculated for the benefit of private families; by the author of the practice of the London hospitals. 12mo. London.

The philosophical transactions, giving some account of the present undertakings, studies, and labours of the ingenious, in many considerable parts of the world, vol. 63. part. 1. 4to. London.

La

La generation, ou exposition des phenomenes relatifs a cette fonction naturelle, de leur mechanisme, de leurs causes en partie, et des effets immediats qui en resultent ; traduite de la physiologie de M. de Haller, augmentée de quelques notes, et d'une dissertation sur les eaux de l'amnios, 2 vols, 8vo. Paris.

Eloge historique de la faculté de medecine de Paris. Discours pour les lauriers academiques, traduit de Latin, prononcé aux ecoles de medecine le 16me Octobre 1770. 4to. Paris.

Système nouveau et complet de l'art des accouchemens tant theorique que partique, avec la description des maladies particulieres aux femmes enciennes, aux femmes en couches, et aux enfans nouveau nes ; traduit de l'Anglois de Burton, par M. le Moine docteur regent de la faculté de Paris : Ouvrage enrichi des notes et des figures. 8vo. Paris.

Traité des maladies vénériennes, dans lequel on indique un nouveau remede, par M. Prestavin. 12mo. Paris.

Vade mecum de botanique, ouvrage utile a tout le monde, et particulierement aux etudiens en medecine et en chirurgie, contenant la description et
les

les propriétés des plantes usuelles, la maniere de les employer utilement en medecine, avec différentes formules ou peuvent entrer leur preparation, par M. Marquet, doyen de medecins de Nanci, et medecin botaniste de S. A. R. Leopold duc de Lorraine et de Bar. 2 vols, 12mo. Paris.

T. C. Hoppen, Abhandlung von der begattung die pflantzen, *i. e.* A treatise on the fructification of plants, by T. C. Hoppen. Altenbourg.

J. F. X. Fauken, Faulung fiebre, &c. *i. e.* A description of the putrid fever which raged at Vienna in the years 1771 and 1772, by J. F. Xavier Fauken, M.D. Vienna.

Della febbre maligna, *i. e.* A treatise on malignant fevers, by M. Migliori. Peronne.

J. F. Henkels Neue medecinische und chirurgische anmerkungen, &c. *i. e.* New medical and surgical observations, by J. F. Henkel. 2 vols, 12mo. Berlin.

Traité de la nouvelle methode d'inoculer la petite-verole, par M. Vieusseux, M. D. 8vo. Geneva.

Lettres de M. le docteur Bietresi et Charles Benoît sur la cause de la non-pulsation des veines. 12mo. Lufanne.

The

The effects of injections into the urethra, and the use and abuse of those remedies in the cure and prevention of the virulent gonorrhoea briefly considered, with occasional remarks on the nature of that disorder, in answer to some modern doctrines. By Thomas Bayford, surgeon. 8vo. London.

Experiments and observations on the mineral waters of Philadelphia, Abington, and Bristol, in the province of Pennsylvania. Read, June 18. 1773, before the American philosophical society, held at Philadelphia, by Benjamin Rush, M. D. professor of chemistry in the college of Philadelphia. 8vo. Philadelphia.

An essay introductory to the study of electricity. 8vo. Bristol.

Histoire de l'académie royale des sciences année 1770, avec les memoirs de mathematiques et de physiques pour la même année. Tirés de registres de cette académie. 4to. Paris.

Memoires sur différentes parties de la physique, de l'histoire naturelle, des sciences, et des arts. Par M. Guettard de l'académie des sciences. 3 vols, 4to. Paris.

Le

Le petit cabinet d'histoire naturelle, ou manuel du naturaliste. Ouvrage utile aux voyageurs, et a ceux qui visitent les cabinets d'histoire naturelle, et des curiosités; contenant tout ce que l'histoire naturelle peut offrir de plus piquant et de plus intéressant; tout ce qui concerne les animaux, les vegetaux, et les mineraux, avec leur propriétés et leurs usages. 8vo. Paris.

Cri de l'humanité en faveur des noyes, ou moyens faciles pour les rapeller a la vie; ouvrage tres intéressant, par M. Isnard. 8vo. Paris.

Traité des maladies veneriennes, par M. Fe-bure, troisieme edition, a laquelle on a ajouté une table analytique des matieres. 2 vols, 12mo. Paris.

Les exercices du corps chez les anciens. Par M. Sabbattier. 8vo. Paris.

Oeuvres de M. Franklin, docteur en loix, membre de l'academie royale des sciences de Paris, des societés royales de Londres, et de Gottingen, des societés philosophiques d'Edinbourg et de Rotterdam, president de la société philosophique de Philadelphie, et resident a la cour de la Grand Bretagne pour plusieurs colonies Britanniques Americaines; traduites de l'Anglois, sur la quartrieme edition, par M. Barbeau du Bourg, docteur

docteur en medecine de la faculté de Paris, avec additions nouvelles, et des figures en taille douce. 2 vols, 4to. Paris.

Avis a mes concitoyens, ou Essai sur la fièvre miliare, suivi des plusieurs observations interessantes sur la meme maladie, par M. Gastelier, medecin a Montargis. 12mo. Paris.

Description du cabinet royal de Dresde touchant l'histoire naturelle. Folio. Dresde.

O. Acrel Chirurgische geschichte, *i. e.* Chirurgical observations made in the royal hospital at Stockholm, by Ol. Acrel, M. D. surgeon-major to the royal hospital, &c. 8vo. Lubec.

Historiae et commentationes academiae electoralis scientiarum et elegantiorum artium Theodoro-Pelatinae. 4to. Manhemiae.

Dizonarie delle arti, *i. e.* A dictionary of arts begun by Mr Francois Griselini and continued by M. l'Abbé Fossadoni. 14. tom. 12mo. Venice.

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M E D I C A L

A N D

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COMMENTARIES.

By a SOCIETY in EDINBURGH.

Nostrum est, dum artis medicae dignitatem tueri, dum turpitudinem,
et infamiam, evitare volumus, animos exsuscitare, intentisque in-
geniis ea omnia revolvere, quae ad artis vim atque perfectionem
quovis modo conducere videantur.

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VOLUME SECOND.

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W. DRUMMOND, *Edinburgh*; and T. EWING,
Capel-street, Dublin.

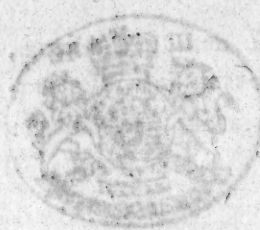
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M E D I C A L
C O M M E N T A R I E S.

S E C T. I.

An Account of Books.

I.

Mémoire qui a remporté le Prix des Arts, au jugement de l'Académie des Sciences, Belles-Lettres, et Arts de Besançon, sur cette question, Indiquer les Vegetaux qui pourroient suppléer en temps de disette à ceux que l'on employe communément à la nourriture des hommes, et quelle en devoit être la préparation? par M. Parmentier, Apothicaire Major de l'Hôtel Royal des Invalides.
12mo, Paris.

THE scarcity of provisions which prevailed in the neighbourhood of Besançon for three successive years, gave occasion to the above question. In considering this subject, it appeared to

our author to be a matter of more importance to inquire into the nature of those vegetables which are esteemed either to be not alimentary, or of a hurtful quality, than to point out those, which, it is already known, may be substituted in the place of grain. In this investigation, he endeavours, in the first part of the memoir now before us, to ascertain the principles upon which the nutritive quality of vegetables depends. In the second, he gives an account of the vegetables which he has found to contain alimentary matter; of the means by which they may be deprived of pernicious qualities; and of the best methods for preparing them, when they are to be used as food.

In the first part of this memoir, after some reflections on the inquiries of different authors concerning the nutritive part of vegetables, Mr Parmentier observes, that this quality is now demonstrated to depend upon their mucilage differently modified. To Mr Beccari of the Bolognian academy, we are principally indebted for the determination of this point. That learned philosopher has discovered, in the flower of wheat, two distinct substances. The one, he terms an animal or glutinous matter; the other, an amylaceous

ous matter, or vegetable paste. As these observations have since been confirmed by many learned chemists, no room was left to question their being well founded. Mr Parmentier, however, entertained some doubt with regard to the opinion of those who imagine that the animal matter of Beccari is the nutritive part of vegetables. Were this true, the same matter should be found in other kinds of grain, which afford nearly as much nourishment as wheat. From this reflection, he was led to some experiments concerning this animal or glutinous matter.

Two pounds of the finest flower of wheat made into a paste, and exposed to a very gradual fall of water, yielded six ounces of an elastic substance, of a somewhat solid consistence, of a yellowish colour, not adhering to moistened bodies, nor affecting the transparency of water. From the same quantity of a coarser kind of flower, he procured, by the same means, nine ounces of this elastic glutinous matter. This he found not to hold in one instance only, but to be uniformly the result of many experiments made upon these two kinds of flower. From this he was led to conclude, with the celebrated Model of Petersburg, that the gluten of Beccari exists

in the cortical part or bran of wheat. To ascertain this fact, he made experiments with four different kinds of flower. From these experiments it appeared, that the quantity of animal matter was always proportioned to the coarseness of the flower. Hence, were this gluten the nutritive part, the coarsest bread, or that which contained most bran, would afford the greatest quantity of nourishment. The contrary of this, however, is known to be the fact.

In continuing his examination of the glutinous matter of vegetables, Mr Parmentier exposed a pound of it, for some days, to a gentle heat. By this means it became dry and brittle, assumed the appearances of transparent horn, and lost more than two thirds of its weight. By trituration with water, this dried matter resumed its former glutinous and elastic appearance, its weight, and colour. Hence, Mr Parmentier concludes, that a pound of the best flower does not contain above an ounce of this gluten.

This gluten has been supposed to be the nutritive part of corn, from its not dissolving unless in vegetable acids; from its assuming a spongy form in boiling water; from its supposed analogy to the animal lymph; and, lastly, from the

the similitude which the products it affords on chemical analysis bear to those obtained from animal matters. From what has been said, however, our author concludes, that this animal matter is not the nutritive part of vegetables. He therefore proceeds to examine the other part of the flower, the amylaceous.

The amylaceous part of wheat, upon being mixed with the same quantity of leaven, which would have been sufficient for as much flower, produced bread of a white colour, but very heavy, and without taste. Upon the addition, however, of a little fermentable mucilage to this mass, it rose properly, and tasted well.

Having found this amylaceous matter in the grains and roots of grasses and leguminous plants, he next endeavoured to discover whether it was to be found in those roots which are supposed to be very nutritive ; to ascertain in what proportion it was present ; and to determine whether it was precisely of the same nature with the amylaceous part of grain. As the subject of these experiments he chose potatoes.

From twenty pounds of potatoes he procured three pounds of a fine powder, which, in every

particular, shewed the same properties as the amylaceous part of wheat. Upon this trial he discovered none of the glutinous or animal matter of Beccari.

This amylaceous part of vegetables, or, as some have termed it, the fecula, is a peculiar gum not soluble in spirit of wine, vinegar, or cold water. It contains more acid, and less water, than the ordinary gums. It is found in many of those plants which make great part of the nourishment of man and other animals. Hence our author concludes it to be the nutritious matter.

But there are other vegetables used in diet, such as the saccharine fruits, and some of the humid roots, in which he could neither discover a glutinous nor amylaceous matter. In these, he supposes, that the nutritive quality must arise from the sugar. The juices of these vegetables, however, upon evaporation, yielded a substance resembling the fecula, and giving nearly the same products upon a chemical analysis; which give a presumption, that the nourishment they afford may at bottom depend upon the same principle.

Having endeavoured to ascertain the nutritive part of vegetables, the author next proceeds to consider

consider what vegetables, not commonly in use, may, in consequence of possessing it, be employed in aliment. With this view, he proposes particular parts of the following vegetables. Horse chesnuts, Acorns, the roots of *Bryona aspera* sive *alba baccis rubris*, Car. Bauch. Pin. *Iris vulgaris germanica* sive *sylvestris*, C. B. P. *Gladiolus major Byzantinus*, C. B. P. *Arum vulgare maculatum et non maculatum*, C. B. P. *Dracunculus polyphyllus*, C. B. P. *Ranunculus vernus rotundis foliis*, C. B. P. *Filipendula major*, C. B. P. the seeds of the *Lychnis segetum major*, C. B. P. the roots of the *Helleborus niger ranunculi folio, flore globofo*, C. B. P. *Fumaria bulbosa radice non cava*, C. B. P. *Mandragora flore subcaeruleo purpurascente*, C. B. P. and *Gramen caninum arvense*, C. B. P.

After this enumeration of plants which may be used in diet, Mr Parmentier next presents us with some remarks concerning each. Although horse-chesnut has not hitherto been employed, yet it is certain, that wholesome bread, without any bitterness, may be obtained from it. Of acorns, bread, he observes, has frequently been made; and, to this day, in some countries, they are in common use. The method of preparation which he recommends is, that they be depri-

deprived of their cover by boiling, then dried and powdered, and afterwards baked in the same manner as the flower of wheat.

The roots of the bryona, iris, gladiolus, colchicum, arum, et dracunculus, are chiefly recommended from their growing spontaneously and in great abundance. The two last contain the greatest quantity of amylaceous matter.

The alimentary quality of the other plants before enumerated, still remains to be ascertained, except the gramen caninum arvense. This plant, in its appearance, approaches to corn; and some naturalists have considered it as the original species from which all our grain is produced. Its roots are sweet tasted, and have long been employed for making ptisans.

In the second section of this part, which concludes the memoir now before us, the author, after some general remarks on the proper season for gathering the roots and seeds above enumerated, proceeds to relate the experiments which he made for ascertaining the best method of preparing them.

He advises, that the fruit of the horse-chestnut, after the skin is taken off, and the juice pressed from

from it, be made into a paste. This mass must be diluted in water, and then strained through a sieve. A milky coloured liquor is thus separated, which, on standing, deposits a fine powder. This being dried, is without either smell or taste, and very fit for aliment; the mass, from which it is procured, retaining the bitterness of the fruit.

Acorns, fully ripe, and made into a paste, were deprived of their bitterness and astringency by merely pressing their juice from them. The mass remaining after the pressure, when dried, was easily reduced to a fine powder, by no means disagreeable.

The roots of the bryona, when treated in the same manner as the horse-chestnuts, yielded a similar white powder. By the same treatment also, fine, white, insipid, inodorous powder, may be procured from the roots of iris, gladiolus, ranunculus, fumaria, arum, dracunculus, mandragora, colchicum, filipendula, and hellebore.

In the preparation of the gramen caninum arvense, it is only necessary, that the roots should be cleansed, cut small, dried, and pounded. This powder, the author observes, does not dissolve in

in cold water or spirits; but it does in boiling water, which it renders thick and cloudy, and, upon cooling, the whole mass obtains a gelatinous consistence. Upon a chemical analysis, it yields an acid empyreumatic oil, which possesses a singular odour, resembling that which is perceived on burning the plant. The spongy residuum calcined in the air, gives a fixed alkali. These properties incontestibly prove, that it contains an amylaceous matter similar to that of grain, which, it has already been observed, appears to be the nutritive part of vegetables. This amylaceous matter, formed into a jelly, and diffused in water, keeps for a long time without suffering any change; it then turns acid, and at length putrifies.

The amylaceous matter of acrid and poisonous plants, although innocent and nutritive, cannot be converted into bread without the addition of some mucilaginous substance. In times of great scarcity, common bran will answer this purpose: But, when potatoes can be had, the addition of a proper proportion of these is to be preferred.

Mr. Parmentier next gives an account of the bread which he obtained from the amylaceous powders of the different vegetables mentioned above,

above, with the addition of potatoes, and a small quantity of common leaven of grain. This bread appeared in general to be well fermented; it was of a good white colour, and free from any disagreeable odour; but to the taste it was somewhat insipid. This, however, he imagined might have been corrected by the addition of a proper quantity of salt.

As the resources against scarcity which are here pointed out, can be procured only at particular seasons, the author next proposes a method for preserving them. For this purpose, he advises, that bread prepared in the manner mentioned above, should be carefully dried, reduced to powder, and then kept in a close cask. By this means, he is of opinion, that it may be preserved for a very long time, and will always be ready to make an agreeable and wholesome panada, by the addition of a little butter and salt.

Mr Parmentier next endeavoured to discover the degree of power with which this alimentary powder nourished. Here he made himself the subject of experiment, and found that three ounces of it for dinner, and as much for supper, made into panada with water, was a sufficient quantity of aliment for a day. From his discharge

charge by stool while he used it, he had reason to conclude, that it is almost totally alimentary. He concludes with recommending it not only as useful in times of scarcity, but as a proper substitute for sea-biscuit, and as a species of food well adapted for armies and hospitals.

II.

Observations on different kinds of Air ; by Joseph Priestley, L. L. D. and F. R. S. Vide Philosophical Transactions, vol. 62. 4to, London.

THE learned and industrious author of this paper, introduces his subject by observing, that he is fully sensible his observations are imperfect, his experiments incompleat. But, having ascertained many facts equally new and important, he has here presented the public with an account of the progress which he has already made. It will, we are persuaded, be the sincere wish of every philosopher, that the hopes he entertains of being hereafter able to communicate farther lights on the same subject, may not be disappointed.

He

He first treats of fixed air, by which he means that air expelled by heat from lime, and other calcareous substances, upon being deprived of which, they become quick-lime. It is also generated by fermenting liquors. So that the author's situation near a public brewery, put it in his power to make many experiments with regard to it.

Lighted candles or chips, immersed in this air, as it lies upon the liquor, are extinguished. The smoke of these substances unites with this air, or is retained by it, and assumes various appearances. Often the upper surfaces of the smoke floating in the air, will be smooth and well defined; while the under is ragged, parts hanging down within the body of the air to a considerable distance, in the form of balls, connected by slender threads to the upper stratum. At other times, the smoke will be formed into broad flakes resembling clouds, parallel to the surface of the liquor, but at different distances from it.

If fixed air be very strong, the smoke of gunpowder fired in it, will be wholly retained; and if by agitation any of it be thrown out of the vessel containing it, the smoke mixed with it will fall to the ground, from its being heavier than the common

mon air. It extinguishes the red part of burning wood, but does not seem to cool a red-hot poker sooner than common air. It unites, altho' slowly, with common air. It unites with the smoke of resin, sulphur, and other electrical substances; yet an electrical atmosphere cannot be made by holding the wire of a charged phial among these fumes.

By various contrivances, water may be impregnated with fixed air, from which it acquires a pleasant acidulous taste, sparkles in a glass; and can hardly be distinguished from good Pyrmont water. From this impregnation likewise, it readily dissolves iron, as was first discovered by Mr Lane. Fixed air may likewise be readily incorporated with wine, beer, or almost any other liquor; and when they are flat or dead, they will, by this means, be revived.

Although cold promotes the absorption of fixed air by water, yet ice did not absorb it. By freezing, water discharges air plentifully, although in a cool temperature it retains it even in open vessels. As Pyrmont water loses its air *in vacuo*, Dr Priestly imagines, that by means of a condensing machine, water may be highly impregnated with the virtues of the Pyrmont spring.

The

The lungs of a cat, suffocated in fixed air, were found collapsed and white, with little or no blood in them. Blood, however, was found to coagulate sooner in fixed air than in common air.

This air kills insects and animals which breathe very little. It is farther destructive to vegetable as well as animal life; and it deprives some flowers of their colours; although this does not universally hold.

Dr Priestly imagines, that the most pure fixed air is to be obtained from diluted oil of vitriol and chalk; and this air he in general used in the experiments above recited. He is of opinion, that fixed air requires only some addition to render it common air; and, from some circumstances, he was led to conclude, that the addition requisite is phlogiston; although he acknowledges, that he is ignorant of the method of combining them.

The author next treats of the air in which a candle or brimstone has burned out. His experiments on this subject demonstrate many curious facts. One of the most obvious circumstances is the diminution which the air suffers from a

candle or brimston having burned out in it. This diminution he estimates at to one fifteenth or one sixteenth of the whole. He did not, however, find, as Dr Hales supposed, that the diminution continued when brimstone was burnt repeatedly in the same quantity of air.

Air diminished in bulk by candles or brimstone is specifically lighter than common air; and, after the fumes have subsided, an animal lives in it as long as in common air. It does not, however, as the Count de Saluce maintained, recover all the properties of common air, either from exposure to cold or compression. But this end, the author has discovered, may be effected by vegetables growing in it.

The next subject of consideration is inflammable air. This the author in general obtained in the manner described by Mr Cavendish in the Philosophical Transactions. Inflammable air has always a strong offensive smell, which is of three kinds, according as it is procured from animal, vegetable, or mineral substances. This air, when made by a violent effervescence, is much more inflammable than when made by a weak one. It is not rendered less inflammable by animal or vegetable putrefaction, although common air, tainted
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ed with putrefaction, extinguishes flame. Plants grow in it without destroying its inflammability. It kills animals as suddenly as fixed air, and with the same phaenomena; nor is it rendered less noxious by animals dying in it. Neither bladders nor corks are capable of confining it.

As Dr Priestly was led, by some circumstances, to imagine, that a mixture of fixed and inflammable air would make common air; he tried, therefore, several methods for producing such a mixture. All of them, however, proved ineffectual. Yet fixed and inflammable air, after standing together near three years, seemed in part to have affected each other.

Inflammable air is not altered from being exposed to oil of vitriol or spirit of nitre, notwithstanding the strong attraction which these fluids have for phlogiston. Mixed with the fumes of smoaking nitre, it goes off with an explosion, like a mixture of half common half inflammable air.

When inflammable air was exposed to water previously boiled, about three-fourths of it were absorbed, and the remainder was but slightly inflammable. By long agitation with water, it en-

tirely ceases to be inflammable, becomes compatible both with animal life and flame ; and, in process of time, acquires the power of extinguishing flame. It acquires the state of common air, when about one half of it, or a little more, is absorbed. Distilled water may be made to imbibe about one fourteenth of its bulk of inflammable air ; but no alteration is thence produced in the taste of the water.

We are next presented with some observations respecting air infected with animal respiration or putrefaction. It is a fact, universally known, that, by the burning of candles, or by the breath of animals, air is rendered unfit for supporting either life or flame. Were there not, however, some provision in nature, by which air thus vitiated is restored to its former state, the whole mass of the atmosphere would in time become unfit for animal life. The reality of such a provision may farther be inferred, from considering, that air is at present as fit for animal respiration as it ever was. But what that provision is, no philosopher has hitherto pretended to determine. How many causes may assist in the restoration of air to its former state, after it has been acted upon by life or flame, is a question which perhaps will never be

be determined: But Dr Priestly imagines that he has discovered two of these causes.

His researches on this subject were chiefly directed by considering those circumstances to which the atmosphere is in fact exposed. Many trials thus suggested to him proved unsuccessful. He found, that air, injured by animal respiration, could not be restored to its former state by standing over fresh or salt water; by the action of light; by antiseptic effluvia; by the fumes of sulphur; by the effluvium of salt-petre; by heat; by rarefaction or condensation; or by exposure to fresh earth. He discovered, however, from a great variety of experiments, that this air can be restored to its former state, either by vegetables growing in it, which they do in a most luxuriant manner, if they be not killed on its being first applied to them, or by long continued agitation with water. As putrid matter nourishes the roots of plants, as plants receive nourishment by their branches and leaves as well as by their roots, Dr Priestly imagines, that they absorb from the air its noxious quality, and thus render it fit either for respiration or inflammation. He imagines also, that water, by agitation, is in a similar manner capable of absorbing this noxious matter. He con-

cludes, therefore, that the growth of vegetables, and the agitation of the sea and of lakes, are two of the great means employed by nature for restoring to its former state that air which has been vitiated either by respiration or flame.

We are next presented with some experiments on air, in which a mixture of brimstone and filings of iron had stood. By this mixture, air is generally diminished about one fifth or one fourth of the whole. In this state, it is even lighter than common air, and is not affected by any future mixture. Lime water is not rendered turbid by exposure to it, and inflammable air mixed with it, is diminished in bulk, but still retains its inflammability.

We are next presented with some remarks concerning nitrous air. By this title, Dr Priestly distinguishes that air obtained from iron, copper, brass, and some other metals, by the nitrous acid; and from gold, or regulus of antimony, by aqua regia. This air, mixed with common air, produces a remarkable diminution of it, attended with a turbid red, or deep orange-colour, and a considerable heat. In proportion as air is rendered less fit for respiration by the flame of a candle, or any other similar cause, it is less affected

ed by nitrous air. It affords, therefore, a test by which the purity of any other air may be determined.

Inflammable air, when mixed with it, burns with a green flame. It suffers a very considerable diminution from a mixture of iron-filings and brimstone made into a paste with water. When thus diminished, it loses its peculiar smell, and has no other than that of common air. Plants die very soon, both in nitrous air, and in common air saturated with it; but neither the one nor the other differ in specific gravity from common air.

Nitrous air is in some degree miscible with water, and imparts to it an acid and astringent taste. Another singular property which it possesses is, that it both prevents putrefaction, and restores putrid substances to sweetness. In consequence of this property, Dr Priestly thinks it may be applied to use for the preservation of birds, fishes, and anatomical preparations. By standing long in water, it suffers a diminution of bulk; but it may be kept in a bladder better than most other kinds of air.

Air infected with the fumes of burning charcoal, is the next subject of consideration. Air

thus tainted is diminished in bulk, and not only extinguishes flame, but is in the highest degree noxious to animals. It shews no effervescence with nitrous air; and, after a certain degree, it is incapable of any farther diminution by the filings of iron or brimstone, the fumes of more charcoal, or any other cause.

Dr Priestly next considers the effects produced on air by calcination of metals, and the effluvia of paint made with white-lead and oil. He found, that, from the calcination of tin and lead, air was diminished more than from any other cause he had before tried. After a certain degree, it is not farther diminished by repeated calcinations. In this state, it is highly noxious; but it is rendered innocent, and recovers, in a great measure, the properties of common air, by washing in water. The author suspects, that it is diminished from the calcination of metals, by being charged with phlogiston, and again restored from the phlogiston being absorbed by the water. From this he suggests it as a query, Whether plants may not restore air diminished by putrefaction from absorbing part of the phlogiston with which it is loaded?

The

The last kind of air of which Dr Priestly treats, is that procured by means of the spirit of salt. He found, that copper, lead, iron, tin, and zinc, when dissolved by the marine acid, yielded an air which lost its elasticity by coming in contact with water; after which, the air which remained was inflammable. Water, impregnated with this air, has an acid taste, dissolves iron, and has even generated inflammable air. Hence it is probable, that the apparent loss of elasticity is owing to part of the air being absorbed by the water. Fixed air, admitted to the whole produce of the air from these metals, had no sensible effect upon it; but lime-water became white. The author, however, suspects this to have arisen from some other circumstance than the precipitation of the lime which it contained. From several experiments, he was led to conclude, that this subtile air did not arise from the copper, but from the spirit of salt. By introducing different substances to it, he found, that it deprived them of their phlogiston, with which it unites in such a manner as to constitute inflammable air. Hence he concludes, that inflammable air universally consists of the union of some acid vapour with phlogiston.

This

This paper is concluded with some miscellaneous observations ; a description of the apparatus with which the principal experiments were made; and an appendix, containing some experiments made by Mr Hey, which prove, that there is no oil of vitriol in water impregnated with fixed air, extracted from chalk by oil of vitriol. This appendix, among other particulars, contains the history of a case of putrid fever, in which fixed air, injected into the intestines by way of clyster, was attended with good effects.

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We have mentioned, in a former Number, that, in consequence of this dissertation on air, the Royal Society of London conferred on Dr Priestly their prize-medal for the year 1773. When that medal was presented to the Doctor at the anniversary-meeting of the society on the 30th of November, the learned President of that justly celebrated institution delivered a discourse on the different kinds of air, which has since been published, at the request of the members.

In this discourse, Sir John Pringle gives an historical account of all the most important discoveries

coveries that have been made concerning the different kinds of air; and he bestows the proper tribute of applause on those industrious philosophers to whom we are indebted for each. He first relates the different particulars brought to light by Mr Boyle, Sir Isaac Newton, Dr Hales, Dr Seip, Dr Brownrigg, Dr Black, Mr Cavendish, Mr Lane, and Dr M'Bride. He then gives a view of the most important experiments and conclusions with which Dr Priestly has improved this branch of philosophy. And he concludes, with congratulating the illustrious body over which he has the honour to preside, on the zeal which at present subsists among them for promoting the great end of their institution; on the many interesting discoveries with which philosophy has lately been enriched; and on the high expectation of future improvements, which may be reasonably entertained.

Disputatio

III.

Disputatio Physica Inauguralis de Putredine Animalibus post mortem superveniente, Auctore
Georgio Pearson. 8vo, Edinburgi.

THE dissertation now before us is confined solely to that species of putrefaction which happens to animal substances after death. It is divided into two parts. The first contains an enumeration of the particular facts relating to putrefaction; and the second treats of its causes.

The particular facts are assembled under three titles, phaenomena, septicæ, and antiseptics. In treating of the first of these, the author begins with a definition of putrefaction, which he considers to be a species of fermentation, characterized by the presence of fætor. He next relates twelve experiments, from which he deduces several interesting conclusions.

1. He observes, that his experiments contradict the opinion of those who maintain, that an acid is generated in the process of putrefaction,
or

or that the acetous fermentation necessarily preceeds the putrefactive. Even by the assistance of the most delicate test of acidity, he was not able to detect it in the fermentation of those animal matters most likely to afford it. Over the flesh of veal, the broth of veal, and the broth of chicken, were suspended slips of paper, stained with litmus; and these, though evidently moistened, preserved their purple colour, although they would have turned red by the least imaginable portion of acid.

2. He thinks they evidently prove the separation of phlogiston, and that it flies off even before putrefaction be properly begun. The inflammable air obtained from putrifying substances, similar to that separated from some metals, as proved by an experiment of the Hon. Mr Cavendish, and the shining appearance of putrifying flesh, sometimes even before putrefaction appears, seem to the author to confirm his own experiments and conclusions.

3. He deduces from them some observations with regard to the volatile alkali generated by the process of putrefaction. He was not able to detect it in animal matter putrifying in open vessels. But there he observes its presence would be fortuitous;

tuitous; because it is only to be discovered in the middle stadium of putrefaction; and, if the heat to which the substance is exposed be great, it escapes as fast as it is generated. He therefore supposes, that his trials were made either before this salt was formed, or after its escape.

4. He concludes, that fermentation is not necessarily attended with animalcula, as he could detect none in flesh which he allowed to putrify both in open and close vessels, although it was carefully examined with a good microscope both by himself and another gentleman well skilled in microscopic observations.

5. He draws some conclusions with regard to the proclivity of different animals to the process of putrefaction. The general result is, that the flesh of younger animals is somewhat more prone to putridity than that of older animals. Dr Pearson found, however, that the flesh of a chicken resisted putridity as long as beef.

On this subject he points out many circumstances which may vary the event of experiments in other respects similar. He does not pretend to have wholly guarded against them. He only offers the above conclusion, therefore, as near the truth;

truth; and he thinks it the more probable, as he found it to be the result of repeated trials.

6. He offers some observations on the nature of the air extricated by putrefactive fermentation. As it rendered water capable of dissolving iron, and produced a precipitation in lime-water, he concludes it to be fixed air. This precipitation occurred even before any fetor could be observed. He concludes, therefore, that the fixed, as well as the inflammable air, escapes before putrefaction. That the effects of the one should appear sooner than the other, although they be separated at the same time, he ascribes to the difference of specific gravity. The loss of weight which putrifying substances suffer, he considers as a farther proof of the separation of fixed air.

7. He observes, that, from his experiments, he could not discover heat generated by putrefaction, which was also the case with Mr Baumé. But he seems to be doubtful, whether heat may not be generated by a large mass of putrid animal matter. And he thinks, that the heat perceived by Professor Monro on thrusting his hand into a dead whale, seems to countenance the opinion of those who think that it may.

He

He next considers the effects which different states of the atmosphere have in varying the process of putrefaction. He examines the opinions of different authors to find the degree of heat, most favouring it; and concludes, that, when there is sufficient humidity to prevent dryness, it will happen soonest with solids in the degrees between 90 and 100, and with fluids from 100 to 110 in Fahrenheit's scale. He observes, indeed, that the fact mentioned by Boerhaave, of the sudden putrefaction of a dog, killed by confinement in a heat of 146 degrees would seem to contradict the above conclusion. But he thinks it probable, that this dog had been exposed to previous causes of putrefaction.

With regard to the dryness of the atmosphere, he observes, that, as moisture is absolutely necessary in the fermentation of animal matter, a dry atmosphere, by abstracting it, will either impede, or totally stop the process.

The influence of different degrees of gravity in the atmosphere on putrefaction does not appear from barometrical observations; but, from the experiments of Dr McBride and Mr Boissieu, Dr Pearson concludes, that a light atmosphere will hasten
putre-

putrefaction, and a heavy one will retard it. From the last mentioned author, however, as well as from some other authorities, it appears, that an entire exclusion of air totally prevents it.

After these observations on the sensible qualities of the atmosphere, the author next considers the influence of impregnations; and first he treats of the effluvia of cities. He observes, that putrefaction is more rapid in large towns than in the country; but he does not pretend to determine the nature of the septic effluvia. On the contrary, he considers it as an event, which, from reasoning, we should little expect.

As another cause of putridity with which the atmosphere may be impregnated, he mentions miasmata. That these do at times shew very septic effects upon animal substances, is, he thinks, proved from a fact related by Senac.

He observes, that the effects of electric effluvia upon putrefaction, are not determined: But, as the electric fluid has been supposed to contain the volatile vitriolic acid, joined to the principle of inflammability; and, as the volatile vitriolic acid by itself is a strong antiseptic, he thinks it probable, that the electric fluid may likewise pos-

self the same property. But this reasoning, he observes, cannot be trusted to; as there are some facts, although ambiguous ones indeed, which lead to a contrary conclusion.

Dr Pearson finishes his account of the phaenomena of putrefaction, with mentioning the effect of wind. A brisk wind, by dissipating the septic vapours from putrid substances, retards putrefaction; while a calm, by suffering them to be accumulated, hastens the process. With regard to the points from which the winds blows, he cites a single observation to prove, that putrefaction proceeds more rapidly with the wind from the south than from the north.

In treating of the title septics, he enumerates eight substances which have been supposed to promote putrefaction. These are sea-salt in a small quantity; bitter purging salt; calcareous earth; magnesia human effluvia, even when the body is in a healthy state; putrid animal substances; quick lime in a small quantity; and fermenting beer.

Under human effluvia, he comprehends the pulmonary and cuticular perspiration or sweat. The septic effects of the former he confirms by
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an experiment. He has given fermenting beer a place under this title, upon the authority of Boissieu, although, from two different trials, he found it to be a very powerful antiseptic.

Under the title of antiseptics, the author has arranged the substances which have been supposed to possess that power, into classes and orders. He refers them to two general heads. I. Antiseptica putredinem prohibentia et impedi-entia. II. Antiseptica putredinem corrigentia et ab ea restituentia.

Among the antiseptica prohibentia et impedi-entia, he enumerates water impregnated with fixed air, and sulphureous vapours. He relates some experiments, which prove that they possess this power. Fixed air is well known to be a sweetner of putrid substances; but he observes, that he has met with no facts which prove that it is capable of preventing putrefaction. The power of sulphureous vapours in prohibiting the vinous fermentation, are very generally known; and, from the experiments here related, the author shews, that this extends also to the putrefactive.

After this account of the facts respecting pu-trefaction, the author next proceeds to treat of

its causes. These he divides into the efficient and final. From a view of the facts, we learn, that without a certain degree of heat, atmospheric air, and humidity, no putrefaction can take place. These, therefore, he considers as the efficient causes. But, altho' the presence of each of these be absolutely necessary, yet, he observes, that, when all of them occur, putrefaction does not immediately follow. He thinks, therefore, that, in strict language, they ought not to be termed causes.

Concerning the proximate cause of putrefaction, the author does not pretend even to conjecture. He observes, that reasoning from analogy, by considering the effects of the efficient causes on other bodies, will not explain the phenomena of this fermentation. They are indeed capable of occasioning a dissolution of bodies, by inducing fluidity, rarefaction, diminution of cohesion, and vapour: But, in these cases, the effects are always proportioned to the power and degree of the causes, which by no means holds in fermentation. Besides, in the putrefactive fermentation, there appears to be a new combination, as well as a separation. In the other cases, there takes place merely a separation; and by the
parts

parts being again combined, a fresh compound, similar to the former, may be produced.

The author next attempts to explain some of the phaenomena preceding putrefaction. The softness, increase of bulk, and appearance of air-bubbles, he ascribes to the aerial particles in a state of aggregation being removed from each other beyond their spheres of attraction, and then exerting a repulsive power. He observes, that the power of cohesion in animal matter has been referred to earth, fixed air, and phlogiston: But he refuses such a power in any one of the principles of the compound, all being absolutely necessary; and, when any one is taken away, the whole is destroyed. Earth, he imagines, cannot be considered as the cause of cohesion; because, were this the case, the whole world would be covered with carcases, and no change of combination could ever take place. To the supposition that fixed air is the universal vinculum of matter, he objects, that the most cohering bodies in nature have not the least particle of it in their composition; besides this, it escapes before putrefaction appears. But, even supposing its escape to be co-existent with putrefaction, yet still no explanation of the action of septics or antiseptics can from

thence be drawn. He acknowledges, however, that the power of fixed air in restoring putrid substances to a state of firmness and sweetness, is a weighty argument in favour of this opinion: But he observes, that these effects cannot arise from its introduction merely as fixed air into the putrid substance. Were this the case, the process of putrefaction could never proceed most rapidly in close vessels, where the fixed air is confined. Nor does it seem, according to our author, to prevent putrefaction, or to correct putrid substances, in the manner which some have supposed. This has been imagined to depend upon its surrounding the body, which is about to putrify, with such an atmosphere as is unfit for carrying off the principle, upon the escape of which putrefaction depends. To this, however, the fact mentioned above, the swift progress of putrefaction in close vessels, occurs as an unsurmountable objection: For, were this hypothesis true, in such a situation, putrefaction could never take place.

He observes, that most of the arguments brought against the two former opinions, are equally strong against the hypothesis of those who
imagine

imagine that putrefaction depends upon the escape of phlogiston.

In the last place, he offers some objections against the opinion which supposes putrefaction to be entirely the work of animalcula. He considers that opinion as more probable, which supposes, that putrid matters are a proper nidus for these animalcula. *1mo*, Because putridity often happens, when no animalcula appear. *2do*, Because they can only be discovered after an obvious fetor. *3tio*, Because the degree of fetor is never proportioned to the number of animalcula. And, *lastly*, Because, although animalcula in general appear during putrefaction in the summer months, yet their presence is always fortuitous.

The author concludes this dissertation with observing, that, from attending to the order of nature with regard to animal and vegetable life, the final cause of the putrefactive fermentation appears to be the resolution of animated forms after death, in order to give birth to a new succession.

IV.

Observation d'une Fièvre putride vermineuse épidémique, qui affligeoit le peuple de la ville d'Arbois en Franche Comté pendant l'année 1766; par M. Bonnevault, medecin de l'hôpital de cette ville. Vid. Recueil d'Observations de Médecine des Hôpitaux Militaires, Fait et redigé par M. Richard de Hautesierck, Ecuyer, Chevalier de l'Ordre de St Michel, ancien Premier Médecin des camps et armées du Roi, Inspecteur general des Hopitaux militaires de France, &c. Tome 2. 4to. Paris.

MANY of our readers are, we presume, no strangers to the nature of the work from which this, and some of the following articles, are extracted. A medical correspondence is established by royal authority among the military hospitals through the kingdom of France; and it is intended, that the practical observations thus collected, shall from time to time be communicated to the public. The first volume of this collection appeared in the year 1766, and we are now favoured

ed with a second. Without attempting any general abridgement of so large a work, we shall present our readers with an account of some of the most interesting particulars; those especially which recommend modes of practice, either generally unknown, or little followed.

In this article we are presented with the account of an epidemic fever, which not only raged very generally, but proved also very mortal, about the town of Arbois, in the year 1766. The winter preceeding had been remarkable for excessive cold, and the spring for long continued rains, by means of which, the peasants, who are the chief inhabitants of the town, could not exercise their usual labours. These circumstances, our author imagines, laid the foundation for this epidemic, which commenced about the middle of June.

The disease usually began with pain in the head, prostration of strength, and total loss of appetite. These were succeeded by every other febrile symptom, and were in general accompanied with delirium, deafness, and lethargy. They were likewise frequently conjoined with diarrhoea, which was commonly attended with a discharge of worms. To these symptoms were often super-added purple spots, or gangrenous eschars. When

a favourable crisis took place, it was either by the continuance of the diarrhoea, or the sloughing of these eschars. When this did not happen, death in general put a period to the patient's miseries about the twenty-first day.

This disease had every appearance of being highly infectious; but it is remarkable, that it attacked neither old people nor infants. The author is of opinion, that this is probably to be ascribed to the prevalence of acid in the primæ viæ at these periods of life. Those inhabitants likewise who studied neatness in their dress and houses, were but little affected with it.

Upon the dissection of those who died of this disease with violent delirium, the membranes of the brain were in general found upon the stretch. And in those affected with low delirium, mortifications were commonly found in the abdomen.

In the cure of this fever, after bleeding those who were of plethoric and robust habits, the author advised emetics to be repeated as circumstances required. He likewise ordered acidulated drinks to be used liberally. And, in cases where there was a lethargic tendency, he recommended the application of blisters. With a view
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of facilitating the discharge by the belly, he employed a decoction of tamarinds and small doses of calomel, joined with ipecacuan. But the remedy which of all others he found most successful for abating the violence, and shortening the duration of the looseness, and at the same time for obviating the progress of putrefaction, and acting as a cordial to the patient, was camphorated vinegar. By these remedies, the violence of this disease, he tells us, was much abated. At length, by the return of good weather, an entire stop was put to it, after it had prevailed for more than eight months, and attacked above three hundred persons in the town and neighbourhood of Arbois.

V.

V.

De Asthmate inveterato Scabie superveniente sanato,
a M. Bonifax Nosocomiorum Medico in Urbe
Bellica in Bugesia. Vid. Recueil d' Observations
de Medecine des Hôpitaux Militaires, par M.
Richard de Hautesierck, Ecuyer, &c. Tome
2. 4to. Paris.

THE case with which we are here presented, was attended with such symptoms as induced the author to derive from it several very important conclusions. With these we shall here present our readers, first premising such a view of the history as may enable them to judge how far they are well founded.

A corpulent man, of a sanguine temperament, had for thirty years been affected with asthma. The fits returned upon him at intervals, especially during the prevalence of westerly winds, and in dry warm weather. In the beginning of the paroxysm, his breathing became laborious, and was attended with a hissing noise, and dry cough. Upon this he was obliged to sit in an erect posture,

sture, and to breathe with his mouth open. He could, at the same time, swallow nothing without the utmost difficulty. After in vain trying a great variety of medicines for this complaint, he could find no other remedy which ever abated his symptoms, but riding on horseback.

When in this situation, he was infected with the itch. As the eruption extended itself, his breathing became every day more easy; and, from the time that the contagion took place, he had never any return of an asthmatic paroxysm. Some time after, he applied to Mr Bonifax for the cure of his itch; but he endeavoured to persuade him, that the effect of this would be a renewal of his asthma. Not satisfied with this advice, however, he went for some days successively into the cold bath, the consequence of which was the repulsion of his eruption. From this time he began to be as much as ever affected with the difficulty of breathing, and soon after a most violent asthmatic paroxysm followed. From this he was, with considerable difficulty, relieved, by bleeding, gentle purgatives, and laxative injections. But, within the space of a month, he had two other asthmatic fits. Our author, therefore, advised him to have recourse to his former cure,
by

by using the bed-cloths of one infected with the itch. Some days after, the eruption appeared, upon which he was again perfectly delivered from his asthma.

While in this state, he took a purgative once a month, and lived upon milk-diet; by means of which, the itch was somewhat mitigated. But, some months after, two pustules, filled with limpid water, such as are occasioned by scalding, appeared upon his skin, accompanied with fever. For four or five days, the fever was gradually increased, and the pustules, after inflaming about the basis, were converted into pus. This our author termed the *febris depuratoria urticaria*; and he treated it with diluents and low diet. About the fifteenth day after the eruption of these pustules, they fell off, being by that time formed into dry crusts. The patient was now entirely free from fever, his itch had disappeared, and he continued to enjoy the same freedom from asthma as before. But, as long as he lived, he was always once or twice every year affected with this *febris depuratoria urticaria*, which always terminated in the manner already described. At length, in the seventy-seventh year of his age, he died of a fit of apoplexy.

From

From this case, the author deduces the following conclusions: *1st*, That riding is of great service to asthmatic patients. *2dly*, That one disease may be cured by another supervening; in which case, nothing can be more imprudent than the removal of the last disease, if it be at all tolerable. *3dly*, That, if the supervening disease be improperly cured, for the relief of the patient it will frequently be necessary to induce it a new, if such a measure be possible. And, *lastly*, that the cure of the disease, thus renewed, is either to be left to nature alone, or to be treated by regimen only, and not by medicines.

VII.

VII.

Hydropisie bilieuse et purulente, guerie par M. Boucher, Medecin de Romans en Dauphiné. Vid. Recueil d'Observations de Medicine des Hôpitaux Militaires, par M. Richard de Hautesierck, Ecuyer, &c. Tome 2. 4to, Paris.

ON the 7th of May 1764, Mr Boucher was called to a girl about twenty years of age, affected with evident symptoms of hepatitis. For this he ordered repeated bleedings at the arm, fomentations to the part, emollient clysters, and, with a view of relieving the pain, narcotic draughts. By the fourth day, her pain was so much abated, that she was sensible of it only upon motion. But there was now discovered an evident enlargement of the right hypochondrium, immediately below the false ribs. Purgatives, which were employed with a view of diminishing this swelling, although slight, brought back the pain. After using some other remedies, without effect, a puncture was proposed, which was performed on the 10th of June. By means of it, twenty pounds of a
thick

thick matter, so yellow coloured, that that it tinged every thing which touched it, were discharged. Four days after, a second puncture was made, which discharged above thirty pounds. The operation was repeated a third time on the 25th of June, and nearly the same quantity as before was drawn off. After this, she continued pretty free from complaints for a considerable time, altho' the swelling and fluctuation of her belly never left her entirely.

On the first of April the year following, her acute pains returned anew, and her belly swelled to such a degree, that it became again necessary to have recourse to puncture. At this time, near forty pints of matter were drawn off, which had precisely the same appearance with that discharged the year before. The day after, a hard and painful tumour was discovered below the false ribs: It was about two inches in breadth, and six in length. Her inferior extremities were now much swelled, and the superior greatly emaciated. Her appetite was destroyed, her strength diminished, her menses suppressed, and her pulse small, hard, and frequent.

The puncture was repeated on the 29th of May, and produced a discharge very similar to the for-

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mer. It was again repeated on the 26th of June; but the liquor discharged was not then uniformly yellow, as it had been formerly. Matters of a white colour, and, to appearance, purulent, were now observed swimming in it.

On the 26th of July, the puncture was repeated for the seventh time. By this operation, there was discharged a prodigious quantity both of pus and bilious matter, which did not seem to be mixed together, but appeared perfectly separate and distinct. They emitted an odour unsupportably fetid.

Some days after this operation, there arose a tumour on the umbilical region, which gradually enlarged, and, at length, broke on the 25th of August. It discharged a great quantity of matter similar to that which had formerly been brought away by the punctures. This kind of matter continued to ouze out from it, till about the end of October. The ulcer then began to cicatrize, and was soon after compleatly healed.

About the end of December, she was seized with an itchy eruption all over the surface of her body; her skin every where peeled off; her nails, which had become horny, were replaced by new ones;

ones; her countenance recovered its natural colour; her appetite returned; her menses appeared again, and continued regular; in fine, she perfectly regained her former health and vigour. It is remarkable, that, during the whole course of this complaint, neither the eyes nor urine ever appeared to have the least yellow tinge. From this case, Mr Boucher infers, that a recovery so surprising ought to encourage physicians to imitate, assist, and compleat the efforts of nature.

VIII.

De l'Hydropisie. Effets que produissent les Pilules toniques de M. Bacher dans cette Maladie, et leur composition. Par M. Richard de Hauteferck. Vid. Recueil des Observations de Medecine des Hôpitaux Militaires. Tome 2. 4to. Paris.

OF all the remedies hitherto proposed for dropfy, no one has yet been discovered which from experience has been found attended with success uniformly certain. Some of them, by occasioning a sudden and copious discharge, produce an alleviation of symptoms, expeditious indeed, but temporary only. Others, although

certain in their operation, are yet so slow, that urgent symptoms will frequently cut off the patient before their effect be produced. And, a third set, while they remove some symptoms, at the same time aggravate others in such a manner, as to render the disease perfectly incurable. Hence, a remedy in its nature effectual, and, at the same time, free from all those inconveniencies, would unquestionably be a great acquisition to the medical art. Such a remedy, we are here told, is to be found in the pills of Mr Bacher.

This cure for dropfy, although kept a secret, has, for some time, had great reputation in France. It has been tried, by order of the court, in the military hospitals, and is now published in the present work. Before mentioning the method of preparing Mr Bacher's pills, Mr Richard presents us with some observations on the nature of Dropfy, and on the remedies generally employed for the cure of it.

The most important of these remarks respect the use of liquids in dropfy. Notwithstanding the urgent thirst in the dropfy, it has hitherto been the practice to recommend, that liquids should be used as sparingly as possible. On the contrary, great part of the success of Mr Bacher's
remedy

remedy is alledged to depend upon the abundant use of mild liquids. We are not only told that Mr Bacher's tonic pills are dangerous without the free use of liquids, but that dropfical patients should, in every case, be enjoined to drink plentifully, upon whatever principle a cure is attempted. This doctrine, Mr Richard assures us, is established by incontrovertible facts; and he considers it as a discovery for which Mr Bacher is as well entitled to the thanks of the public as for the invention of his tonic pills.

Mr Bacher's pills are composed of an extract of hellebore, a solution of mirrh, and powder of *Carduus Benedictus*. The extract is prepared from the *Helleborus niger foliis angustioribus* of Tournefort, and is directed to be made in the following manner: Take any quantity of the dried roots of the hellebore, gently bruised, put it into an earthen or glass vessel, pour upon it as much spirit of wine as will moisten the whole; let this spirit of wine be impregnated with vegetable alkali, one part of alkali being added to nine of spirit. Let the root remain in this situation for twelve hours, stirring it two or three times at proper intervals. After this, add to it a fresh quantity of the spirit, treating it in the same

manner as before, Then pour upon it as much good Renish wine as will stand about six inches over it. As the roots absorb a considerable proportion of wine, let frequent additions be made so as to keep the liquor for forty-eight hours about the same height. The materials being thus prepared, let the whole be placed upon the fire, boiled for half an hour, and then strained off, by the assistance of violent expression. Let the same process be again repeated, with the root remaining after the expression. After this, the insipid woody residuum may be thrown away. Mix the liquors obtained at both expressions, and add to the whole twice the quantity of boiling water. Let it then be evaporated over the fire in a broad silver vessel, till it acquire the consistence of a syrup. Add to it again about twice the quantity of boiling water, and evaporate as before. Then add about a ninth part of the spirit of wine, and evaporate the whole to the consistence of turpentine. The extract thus prepared, according to Mr Bacher, possesses the active qualities of the hellebore, while, at the same time, it is freed from all the volatile, nauseous, and acrid particles.

The solution of myrrh is prepared in the following manner: Let any quantity of it, grossly
pow-

powdered be dissolved in water over a gentle fire, then strain it through a linen-cloth, and afterwards evaporate over a gentle fire, constantly stirring it, till it acquire the consistence of a thin extract.

The only preparation necessary for the *carduus benedictus* consists in reducing to a powder the leaves of the plant, gathered before it arrives at seed, and in passing this powder through a silk searce.

The formula which Mr Bacher gives for his pills is as follows :

℞. Extract. nostr. hellebor.

Mirrhae solutae aa ʒi.

Card. bened. pulveris. ʒiii. ʒi. M.

F. s. a. massa æere sicco exsiccanda, donec formandis pilulis apta sit. singul. ad gran. semiss.

Since the year 1731, Mr Bacher senior has employed these pills with great success. In 1772, he gave the receipt to the Marquis de Monteynard, the minister at war, by whose orders this remedy has been tried in the military hospitals. And Mr Richard has here collected above twenty cases, recorded by different physicians, who tried them there ; in all which they were attended with remarkable success, even when every

symptom seemed to portend the greatest danger. They have been given to the extent of thirty for a dose, taken in three portions of ten each, at the distance of an hour between every portion. The quantity taken, however, must be regulated by the effect they produce, which is a very copious evacuation, both by stool and urine. It is alleged, that they will at the same time serve to brace up and strengthen the solids. Hence, they are prohibited in all those cases in which dropy is complicated with a tense fibre, or inflammatory diathesis. They are also forbid where there is any suspicion of internal suppuration, or incipient gangrene. They must also, we are told, be used with great caution in warm climates; as, in such a situation, they have a tendency to produce too violent a discharge. But, in all cases of dropy attended with relaxation, this remedy, the basis of which was so effectual in the hands of Hippocrates, may, we are assured, be used with the greatest success. And Mr Richard concludes with observing, that it gives him singular satisfaction to make public, by order of the minister, a remedy so powerful for the removal of one of the most obstinate and most common diseases with which mankind are afflicted.

IX.

Dépôt critique au Foie guéri par l'ouverture. Par M. Michel, Chirurgien-major du regiment d'Enguien. Vid. Recueil des Observations de Medecine des Hôpitaux Militaires. Par M. Richard de Hautesierck, Ecuyer, &c. Tome 2d. 4to. Paris.

AN elderly man, after a bilious fever, felt a pain in the right hypochondrium, which he bore for some days with very little inconvenience. Mr Michel was at this time consulted. Upon touching the region of the liver, he was sensible of uncommon resistance, and the patient at the same time felt an acute pain. He was, besides this, affected with fever and slight sweatings. The author considered this case to be an incipient suppuration of the liver, and ordered the application of emollient cataplasms. The day following, the pain was augmented, and a considerable tumour could be discovered. Soon after, fluctuation could be sensibly felt. Upon this, an opening was made into it, and a very considerable quantity of purulent brown coloured matter was discharged. A finger was introduced

duced into the abscess, which extended to the depth of about an inch and a half into the liver. The wound being much stuffed by the dressings, a bilious vomiting ensued; which however, ceased, as soon as the dressings were eased. But this was the only inconvenience he felt; and he was soon radically cured. At the end of two years, the author saw him in perfect health.

X.

Des Drageés, ou Pilules de M. Keyser. Par M. Richard de Hautesierck. Vid. Recueil des Observations de Medecine des Hôpitaux Militaires. Tome 2. 4to. Paris.

FEW medicines, while kept secret, have awakened the attention of the public in a higher degree than Mr Keyser's pills. And there are few, concerning the composition of which, a greater number of conjectures have been risked. The prescription, however, was long since deposited in the hands of the French government, upon condition that it should not be published till the death of the author. That event has now taken place; and Mr Richard, by order of the minister,

hister, here relates the whole process, in the words of the author himself.

The account with which we are presented, for the preparation of these pills, describes six different operations.

The first, and what, according to Mr Keyser, is the most essential operation, consists in separating the mercury very exactly from all heterogeneous matter, by reducing it to an aethiops. This is effected by means of an hydraulic machine, a plan of which Mr Keyser intended to have given to government before his death; But, although he did not live to accomplish his resolution, his family still offer to do it when desired. According to the description which is here given, this machine consists of a number of buckets, in which mercury is triturated with water, till the water acquire a black colour. This water, upon standing, deposits a sediment, which being dried by a proper heat, is the aethiops required.

The second process consists in revivifying the mercury by distillation, in freeing it from all oily matters by means of quick-lime; in detaching this quick-lime by repeated washings; and,

and, afterwards, in drying it by means of a sand-heat.

The third operation consists in the reduction of the mercury purified by this process to a red calx, by means of heat. In conducting this operation, Mr Keyser advises, that the mercury be put into glass matrasses, a small quantity only in each. For the proper degree of heat, he directs those who would practise the operation, to consult Lemery, and other chemists.

The fourth operation is, the dissolution of the calcined mercury, obtained by the former process, in distilled vinegar, by means of triture. A pound of this mercury may be dissolved in eight pints of vinegar, by rubbing it, for an hour or two, in a mortar, which should be kept solely for that purpose. Care must also be taken that the vinegar be not distilled in a metallic, but in a glass vessel.

The fifth process consists in the intimate mixture of this vinegar, impregnated with mercury, with manna. Each pound of the vinegar, containing about two ounces of mercury, will require two pounds of manna. They must be rubbed together upon marble stones, till they acquire a
uniform

uniform consistence, which will be so far liquid as to pass through a hair-cloth, for separating the impurities of the manna. After being managed in this manner, it must be spread upon a marble slab, and left to dry there, without the assistance of fire, till it acquires such a consistence as not to run off upon the table being turned to its side. It must then be placed before the fire, and at the same time moved from one part of the stone to another, by means of a knife, furnished with a large pliant blade. By this means, it is perfectly prepared for forming the pills.

The sixth and last process consists in the formation of the mass thus prepared into pills. These Mr Keyser made to weigh either three grains, or a grain and a half, the first for robust, the last for delicate constitutions.

To this account given by Mr Keyser for the preparation of his pills, he has added some additional reflections, by way of supplement. He observes, that, by the purification of the mercury from distillation, a great quantity of heterogeneous matter is separated from it. This, however, by no means frees it completely from all foreign matter. And, as mercury purified, upon being calcined and dissolved in vegetable acid, is a
much

much more powerful medicine than mercury calcined without purification, he concludes, that repeated purifications would render it still more active.

Another remark which he gives, respects the dissolution of the mercurius calcinatus in the distilled vinegar. He observes, that the mercury thus dissolved, may be made to unite with running mercury, and to form a very singular product. He formerly mentioned, that a pound of this mercurius was to be dissolved in eight pints of vinegar. If to this be added two pounds of running mercury, and the agitation continued, a substance will arise to the surface in the form of cream. This being removed by the assistance of a wooden spoon, more will continue to rise as long as the agitation is continued. The cream being dried, and incorporated with manna, in the proportion of one part of the cream to eight of manna, forms a very useful purgative, and is said to be an effectual remedy against recent venereal complaints, particularly against chancers.

Mr Richard concludes his account of Keyser's pills with observing, that he considers it to be, without exception, the most effectual remedy for the venereal disease hitherto discovered. But,
before

before entering upon the detail, he remarks, that it is his opinion the process may be much abridged, without diminishing the efficacy of the medicine. He judged it proper, however, to deliver to the public the method of preparing the pills in Mr Keyser's own words ; and he has not afterwards pointed out the improvements he proposes. This, therefore, is a subject upon which chymists may exert their ingenuity, and probably with advantage to the public.

S E C T.

S E C T. II.

Medical Observations.

I.

*An Account of the Operation for the Aneurism
being performed upon the Femoral Artery,
with Success, by Mr Charles Leslie Surgeon
at Cork. Communicated to Dr Monro.*

A Young man about fourteen years of age, plunged a pen-knife about three inches long, into the inside of his thigh, where the femoral artery begins to make its curve to form the poplitea. The blood, at first, flowed with great violence ; but, from the smallness of the wound, as the blade of the pen-knife was very narrow, it soon insinuated itself into the cellular membrane all round. From the pressure made by his companions who were present, it soon became grumous, and compleatly corked up the orifice.

At

At this time, he was twelve miles from any proper aid, and was under the direction of an apothecary, who, ignorant of what had happened within, treated it for ten days as a superficial wound. But, being alarmed by its not healing, and observing a pulsation in the part, he brought him to the town of Cork, and put him under the care of Mr Dacut, an ingenious man in his profession. He, suspecting the mischief, called for my assistance; and, upon examination, there remained no doubt of its being an aneurism.

I recommended that the operation should be immediately performed. But the parents, who strongly objected to the cruelty of such a cure, in a case, which, to them, seemed trifling, put it off from day to day for three weeks. During all this time, I repeatedly affirmed, that the coagulated blood, which then acted the part of a cork, would soon disengage itself, and that he might lose his life for want of timely assistance. The event proved the truth of my prognostic. For, about the end of the third week after I saw him, as he was dressing the fore, the clot of grumous blood flew out with violence, and the blood from the artery almost reached the top of the bed in which he lay. As he had been directed to keep

a tourniquet upon the leg, to guard against such an accident, it was immediately tightned, and the flux of blood by that means stopped.

Every help was now called for; and it was the general opinion that the limb should be amputated, without exposing his life to any farther hazard. I strongly objected to this step, till every other means of taking up the artery had failed. From my being the proposer of such a trial, it fell to my lot to go through the operation. I could not promise success; but, as I had frequently performed the operation in the arm, I set about it boldly, determined, if possible, to succeed. I made the external incision from six to eight inches long, lest a first attempt with the needle should fail. After discharging the grumous blood, and several pieces of the cellular substance in a putrified state, I discovered the wound in the artery. I passed a large crooked needle above the opening, and another an inch higher. Upon tying the first, I found I had secured the vessel, so as to prevent any loss of blood. The other thread was left to guard against accidents. To prevent any discharge from recurrent vessels, I passed a third ligature below the wound, and secured it also. The tourniquet was then loosened, and every thing

thing promised so well, that the wound was dressed up. Every precaution was, however, taken, by proper compresses, and a slight application of the tourniquet, to lessen the force of the blood in the vessel. But, in half an hour, a fresh alarm was given, and the flux of blood appeared as great as at first. Amputation was again urged. Encouraged, however, by the hopes I had conceived from the first attempt, as my patient's strength was yet unimpaired, I insisted on another trial. It was agreed to. Upon removing the dressings, I found, that the first ligature had cut through the adjacent parts, which, from the operation being so long delayed, had become putrid, and unable to make sufficient resistance. By this means, the pressure of the ligature upon the vessel was removed.

I now resolved to take a fresh firm spot higher up. And, from the size of the aperture in the first operation, I had little more to cut. However, to make sure of it, I took up the vessel three inches at least above the former ligature. Securing every thing as before, I left the tourniquet at liberty, and the wound, without any bandage, for an hour. At the end of that time, finding every thing to my wishes, I dressed all, and set-

tled him to rest. From this moment, except the pain brought on by the operation, he never experienced any inconvenience. A slight swelling indeed in the leg and foot, with an inability of movement, continued for some weeks. But the wound healed kindly, his strength of limb returned gradually, and at present he feels not the least defect.

II.

The History of a Suppuration in the Brain, terminating fatally ; with an Account of the Appearances upon Dissection. By

ON the 6th of September 1771, I was desired to visit a gentleman about 36 years of age, who, for two or three days, had been affected with a violent pain in his right ear. He informed me, that, for several years he had been deaf of that ear, and that, ever since his infancy, a little purulent matter used at times to be discharged from it ; but without occasioning any uneasiness to him. Upon looking into his ear, I observed

observed some purulent matter ; in consequence of which, I ordered warm water to be injected into it, and advised him to take an anodyne at night, and, the morning after, a dose of the aloetic pill, with a few grains of calomel.

September 8. He continued much in the same way as when I first saw him. But, at night, the pain in his ear was much aggravated, and shot across his head. He was then blooded with leeches in the right temple, and, after that, having some inclination to vomit, he got a scruple of ipecacuanha, which operated five or six times. By these means, his head-ach was a good deal relieved.

9. He had passed a very bad night, and his head-ach was little better than it had been the preceeding evening ; upon which a blister was applied over his whole head.

10. Notwithstanding the blister, his head-ach continued much as before, and he complained of his stomach ; for which he was ordered a dose of rhubarb and calomel, to be taken the following morning.

11. His head-ach was more violent than ever ; and he was much affected with sourness in his

stomach. He was then blooded in the temporal artery to six ounces; and, as the purgative which was taken in the morning had not operated, he got a dram of magnesia, which was repeated in two hours. This procured three stools; but neither the purging nor bleeding had any influence in relieving his headach. Part of his head, which had been before blistered, was ordered to be kept running with epispastic ointment.

12. He continued much pained, and was very restless till about four or five in the morning of the 13th, when he had a quiet sleep, and awaked entirely free from pain. Through the day, he slept a good deal, and, at intervals, eat victuals with a tolerable appetite, which he had not done from the time that he was first attacked with the headach. Towards evening, however, he seemed dull and heavy, and talked a good deal thro' his sleep; upon which a blister was applied to his back.

On the night of the 13th, he became delirious, and talked incessantly through the whole of the day following. His pulse, however, in the morning, did not exceed eighty in the minute; the heat of his skin was no more than natural; he had no drought; and his tongue was moist
and

and clean. He was at that time ordered a solution of glauber's salt, by way of purgative. In the evening, he felt very warm; his pulse had risen to 96, and was full and strong. He was then ordered to lose ten ounces of blood, which proved very fizy. He got a mixture of nitre and vinegar, to be taken by spoonfuls every two or three hours. And, as the glauber's salt taken in the morning had not operated, a purgative clyster was thrown up, which, however, produced no stool.

15. He continued to sleep and rave by turns. In the morning, he was scarified and cupped on the right temple; in the forenoon, he had five or six stools, which were passed without his being sensible of it; and, towards evening, he was seized with a heavy apoplectic sleep; upon which half a dose of one of Dr James's powders was ordered to be given him every three or four hours through the night.

16. He passed a good deal both of feces and urine involuntarily; after which, he seemed to be somewhat relieved. At night, however, he was much affected with startings, and subsultus tendinum. He then lost twelve ounces of blood,

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which

which was as fizy as before. The nitrous mixture and James's powders were ordered to be continued.

On the morning of the 17th, he was again scarified and cupped; his startings and subsultus tendinum were worse than before; and he frequently tossed about his legs and arms with great violence. His urine, which had been always before discharged in quantities at a time, now came from him continually, and in drops.

18. He had violent startings, and much delirium; his pulse was in general above a hundred; and, although his eye looked well, yet, upon its being suddenly opened, and a lighted candle brought very near it, the pupil suffered no contraction. He was that day blooded with leeches on the temples; and, as he could not swallow but with very great difficulty, blisters were applied to his fauces. It deserves to be remarked, that, from the 14th, he never asked for food; but, when it was offered him, he took it freely till that afternoon.

During all the 19th, he lay quite insensible, affected with startings, subsultus tendinum, and laborious breathing. His pulse varied from an hun-

hundred to an hundred and forty. He had also a constant *stillicidium urinae*; notwithstanding which, there was a hardness felt at the under part of his belly, which was easily known to arise from a distention of the bladder. A catheter was then introduced, and near two pints of urine drawn off, but not without the assistance of pressure upon his belly. After this, his pulse became gradually quicker and quicker, his breathing more laborious, and he died on the 20th about six in the morning.

Upon the dissection of his head after death, the middle and posterior lobes of the right hemisphere of the brain, at their upper part, for the breadth of near two inches, adhered firmly to the dura mater, covering the *os petrosum*, and to the *tentorium cerebellum superextensum*.

On cutting into that part of the brain, an abscess was discovered, containing near two ounces of very fetid greenish coloured pus, which was confined below by the adhesion already mentioned, and had destroyed the substance of the brain above, as high as the lower part of the inferior cornu of the right lateral ventricle.

On laying open the ventricles of the brain, the surface of the left corpus striatum was found
in-

inflamed. Both thalmi nervorum opticorum were of a dark purple colour on their surface, and, at their under and back part, contained some quantity of greenish fetid pus. The septum lucidum, fornix, sides of the third ventricle, and the anterior process of the cerebellum, which is over the valvula Vieussenii, were softer than natural, of a greenish colour, and had a fetid smell.

Clear viscid lymph, to the quantity of a teaspoonful or two, was observed in the ventricles of the brain. The brain and cerebellum, with the medulla spinalis, except in the particulars already mentioned, seemed to be in a sound state.

The dura mater covering the os petrosum, was of a darker colour than on the other side, and, as was already observed, adhered in part to the brain. The os petrosum of this side was likewise of a darker colour than on the left; but it was neither spongy, nor in the least degree carious.

The right meatus auditorius was filled with fetid pus of a brownish yellow colour; and the membrane of the drum, and small bones of the ear, had been formerly quite consumed; so that the pus filled likewise the cavity of the tympanum.

III.

A Case of an imperforate Hymen by Mr Alexander Eason, Surgeon to the eighteenth Regiment of Dragoons.

ROSE DAVEY, aged eighteen years, who never had the menses, complained to me of a swelling in her belly, of some months standing, increasing in size, and giving here more pain every day. Upon examination, I found it to rise over the pubis, inclining to the right side. Her bashfulness made her conceal the real cause of this complaint; but a female relation of hers standing by, told me that she had not passage like other women. From a similar case mentioned by Dr Cleghorn in his lectures, I readily guessed, that the hymen was imperforate. Upon examination, I found it to be so; and, when I put a finger upon the hymen, and my other hand on the tumour of the abdomen, by making an alternate pressure, I could distinctly feel a fluctuation. An aperture was immediately made, at which there flowed out about four pounds of thick black blood, not unlike molasses, both in colour and

and consistence, but without any smell. In my opinion, there is not the least doubt, that this woman had menstruated repeatedly, and that the thinner parts were absorbed, while the grumous part remained in the uterus. She now continues well, and has the menstrual discharge regularly.

IV.

A remarkable History of an imperforate Hymen, by Dr Samuel M'Cormick, Physician at Antrim.

J—— A——, when about sixteen years of age, began to be affected with those symptoms which usually occur to females at that period of life. Little attention was paid to her case for more than a year, as it was imagined that time, and the use of such herbs as good women generally give for these complaints, would answer the end of bringing on her menstrual discharge. But her complaints growing more severe from time to time, particularly about the monthly periods, her parents applied to a physician for his assistance. By his advice, she continued for at least

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a year in a course of the strongest emmenagogue medicines that could be given. But, in place of relieving, they always exasperated her complaints.

By the time she arrived at twenty-three years of age, she was in a most deplorable state. It was indeed shocking to hear her lamentable cries. Her pains could not be distinguished from the very last effort of a woman in labour; and they intermitted in the same manner every ten or fifteen minutes. In this situation, death, which was daily expected, was even ardently wished for by all her friends. These violent pains, however, were not constant. They generally continued for three or four days at a time, and would then so far remit of their violence for two or three weeks, that she could get a little sleep, and was able to take some nourishment. But, at the end of these intervals, they again returned as formerly.

In this situation, I was applied to. As two cases had before occurred to me where the symptoms were somewhat similar, which I found to arise from the hymen being imperforate, I suspected that the present complaints might be produced from the same cause. Upon examination, it was found,
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and consistence, but without any smell. In my opinion, there is not the least doubt, that this woman had menstruated repeatedly, and that the thinner parts were absorbed, while the grumous part remained in the uterus. She now continues well, and has the menstrual discharge regularly.

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that there was not only no perforation, but one solid mass of flesh seemed to fill up the whole vagina. No fluctuation could here be observed from the contained menstrual humour, as I had found in other cases. It was, however, thought expedient to attempt something, as a continuance of her complaints seemed to threaten certain death. Besides the circumstance already mentioned, another very discouraging in this patient was, that the space between the anus and meatus urinarius was much less than usual, although she was of a large gross make. The method, therefore, which was thought to be most advisable, and to be attended with least danger, was to pass up a small canula with a perforator, such as is used in taping for the dropsey, but of a longer make. It was accordingly pushed up about three inches, as nearly in the direction of the vagina as could be guessed at. Upon withdrawing the perforator at this time, nothing appeared. But, after proceeding about an inch farther, there issued out a little thick black grumous blood, resembling tar, which could not pass freely from the narrowness of the instrument, and the viscosity of the humour.

Encou-

Encouraged by this promising appearance, a larger instrument of the same construction was then passed up. Upon this, a very plentiful discharge of the same dark coloured matter ensued. There came away no less than four or five quarts of it, without any offensive smell, or the least appearance of putrefaction; a remarkable instance how long extravasated blood may be lodged in the human body without turning putrid, when the external air has no access to it. For, no doubt, some of this blood had been lodged in the uterus at least seven years. The more liquid part of it being taken up by the absorbents, had left the remainder in the condition mentioned above. By using at first sponge-tents, and afterwards large dosils, armed with digestive, the vagina was sufficiently dilated, and, in three weeks, the menstrual discharge appeared of its natural colour. In twelve months after, this patient ventured upon a husband, and is at this day the mother of three fine children.

V.

An Account of the Discharge of Feces mixed with the Urine from the Urethra of a Woman. By Mr James Hill, Surgeon in Dumfries.

A Middle aged lady, in spring 1749, became affected with obstinate costiveness. For this complaint, she used, from time to time, laxatives of different kinds, which, although they alleviated her complaint, did not remove it.

About the beginning of May, she went to a considerable distance in the country. There, as she afterwards informed me, her complaints returned with greater violence than they had ever done before. In spite of all the assistance she could obtain, she had no passage, either by stool or urine, for the space of eight days. During all this time, she was affected with the most excruciating pains, and her belly swelled to a surprising degree, although she laboured under an almost constant vomiting. After this, she discharged some urine; but it was mixed with a considerable quantity of feces. She had then

a stool, and the swelling of her belly fell considerably, although not altogether.

About the middle of May, she came again under my care. After her return, she lived about three months. During all this time, she never passed one drop of urine without a mixture of feces. And this had been the case from the first time that her urine was so long obstructed in the beginning of May; altho', during the whole time, she continued to pass some feces in the natural way. Another circumstance, which deserves to be remarked in this case, is, that no sooner did any flatulencies move in her stomach or bowels, but they made their way to the bladder. There they were retained till a convenient opportunity, when they were always discharged with a very great noise.

After she had continued in this state for some time, her belly again began to swell, and continued to increase slowly till she died, which was about the middle of August. At that time, it was greatly distended. It was imagined, that this last swelling was owing to the cohesion of the intestines with the bladder not being compleatly tight. Supposing this to be the case, the contents of either might make their way into the abdomen.

To be satisfied in this particular, and to be able to judge with greater certainty concerning the state of the parts affected, at the desire of Dr Hay and Dr Gilchrist, both of whom attended this patient in her last illness, I solicited permission to open the body. But it was refused.

VI.

The Case of a Man affected with a Difficulty in passing Urine, occasioned by a Discharge of Wind from the Urethra. By Anthony Fothergill, M. D. Physician at Northampton.

SOME time ago, I was consulted by an old man, upwards of seventy, who had long laboured under a chronic diarrhoea, and great flatulency in the bowels. But his principal complaint was a difficulty of urine, with which he had been severely afflicted for some months, and which was now attended with some very peculiar circumstances.

According to his own account, he was unable to empty his bladder without several painful and ineffectual efforts, occasioned by wind collected in the urethra, which produced an audible whizzing

zing noise, and discharged itself in bubbles. Then a fresh stream of urine would flow till it received another sudden check from a fresh quantity of air crowding into the canal, and soliciting its discharge. This strange account excited my attention to ascertain, if possible, the cause of so unusual a phaenomenon. Before he left me, an opportunity offered of gratifying my curiosity, and of fully satisfying myself of the truth of his account.

On his endeavouring to pass urine in my presence, the whizzing noise in the urethra became very sensible, and presently formed a succession of bubbles at the extremity of the glans. That elastic air issued from the bladder, was therefore now unquestionable. But how it got there was not very evident. The blood, and other animal fluids, have been shewn by modern philosophers to contain fixable air, which, under certain circumstances, may be extricated from them, and become elastic. Why may not this happen in the urine? This might seem plausible, but not satisfactory, as no circumstance accompanied the present case which could be presumed capable of producing such an extrication of air in the bladder. It therefore now occurred to me, that elastic air could not be

present in the bladder; unless it was transmitted by some praeternatural communication with the intestines. And, for this purpose, it was only necessary to admit a previous inflammation of either the external coat of the bladder or rectum, and a consequent cohesion of the two terminating in suppuration, and forming a perforation thro' each viscus. As the principal circumstances corresponded with this idea, I found no difficulty in admitting it; and I had afterwards the most ample testimony, that it was not ill founded. Why the air should intercept the urine in its course through the urethra, will not appear wonderful to those who have considered its effects in common water-pipes.

The uva urfi, so strongly recommended by Dr de Haen in ulcerations of the urinary passages, was administered; but it seemed to exasperate the disease. Indeed, under such deplorable circumstances, and at so advanced a period of life, when the strength was so nearly exhausted, no hopes of recovery could be entertained from any medicine whatever. The symptoms, however, were, in some degree, alleviated by mucilaginous medicines, joined with the Peruvian bark, and opium at intervals. In this way he continued to
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linger on about two months. Ten days before his death, the discharge of wind by the urethra increased much, and was attended with constant pains and tenesmus. Purulent matter, and real alvine feces now accompanied his urine. This proved to a demonstration, although leave could not be obtained to inspect the diseased parts after death, that there was a direct communication between the bladder and rectum.

In younger subjects, this disease might possibly, in some instances, though never without great difficulty, be cured by a course of ass-milk with Bristol-water, together with a strict regimen, and a prudent use of mild balsamic medicines and injections. In old age, although the disease be incurable, yet it is of consequence to the practitioner, as well as to the patient and his friends, that a right judgement should be formed of its nature and probable event. This end, however, can only be obtained from such singular cases being faithfully recorded when they do occur.

S E C T.

S E C T. III.

Medical News.

A Very considerable period of time has now elapsed since Dr Hervey suggested, that the blood was possessed of a living principle. His opinion concerning this particular never seems to have gained much ground, and has been long entirely neglected. But Mr John Hunter of London has lately endeavoured to revive this doctrine ; and, from attentive anatomical investigation, has adduced many ingenious arguments, to prove, that the blood is really alive. A view of these cannot fail to be highly acceptable to our readers.

The sense in which Mr Hunter adopts the term *life*, may be understood from observing, that he considers a muscle cut out of the body to be a-
live

live as long as it continues capable of being acted upon by stimuli of any kind.

He is of opinion, that the particular parts of an animal body have a principle of life, independent of the effect which arises from their union as one system. This is exemplified in numberless cases. Thus the muscles of a turtle continue alive for a great while after the animal, as one whole, is dead.

He alledges, that, in the nature of things, there is not a more intimate connection between life and a solid, than between life and a fluid. For, although we be more accustomed to connect it with the one than the other, yet the only real difference which can be shewn between a solid and a fluid is, that the particles of the one are less moveable among themselves than those of the other. Besides, we often see the same body fluid in one case, and solid in another.

That the blood is really alive, Mr Hunter is induced to believe, from the following reasons :

1st, It unites living parts, in some circumstances, as certainly, as the yet recent juices of the branch of one tree unite it with that of another.—Were either of these fluids to be considered as extrane-

ous or dead matters, they would act as * stimuli, and no union would take place either in the vegetable or animal kingdom. This argument, Mr Hunter imagines, is still farther established by the following experiment. Having taken off the testicle from a living cock, he introduced it into the belly of a living hen. Many weeks afterwards, upon injecting the liver of the hen, he injected the testicle of the cock, which had come in contact with the liver, and adhered to it.

2dly, The blood becomes vascular like other living parts.—Mr Hunter affirms, that, after amputations, the coagula in the extremities of arteries may be injected by injecting these arteries. And he has a preparation, in which he thinks he can demonstrate vessels rising from the center of what had been a coagulum of blood, and opening into the stream of the circulating blood.

3dly, Blood taken from the arm, in the most intense cold which the human body can bear, raises the thermometer to the same height as blood taken in the most sultry heat.—This he considers

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* Mr Hunter's opinion of the influence exerted by dead parts of the animal body when they act as stimuli to the living system, may be understood from his doctrine of exfoliation. See our first vol. p.425,

as a strong proof of the blood's being alive; as living bodies alone have the power of resisting great degrees both of heat and cold, and of maintaining, in almost every situation, while in health, that temperature which we distinguish by the name of *animal heat*.

4thly, Blood is capable of being acted upon by a stimulus.—In proof of this, he observes, that it coagulates from exposure, as certainly as the cavity of the thorax or abdomen inflame from the same cause. The more it is alive, that is, the more the animal is in health, it coagulates the sooner on exposure; and the more it has lost of its living principle, as in the case of violent inflammations, the less is it sensible to the stimulus produced from its being exposed, and it coagulates the later.

5thly, The blood preserves life in different parts of the body.—When the nerves going to a part are tied or cut, the part becomes paralytic, and loses all power of motion; but it does not mortify. If the artery be cut, the part dies, and mortification ensues. What keeps it alive in the first case? Mr Hunter believes, that it is the living principle which alone can keep it alive; and he thinks that this phaenomenon is inexplicable

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on any other supposition, than that life is supported by the blood.

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In a former number, we gave an account of the good effects obtained, in some parts of America, from the use of the couhage, or cow-itch, as an anthelmintic. This plant is also a native of the East-Indies; and the following accurate description of it was lately transmitted by Mr James Kerr at Patna, to the Professors of medicine in Edinburgh.

Nomen. By Europeans it is called couhage or cow-itch; by many writers, a phaseolus; by the natives of Bengal, cadjuet, from the itching and scratching it produces.

Classis. According to the system of the incomparable Linnaeus, it stands in his seventeenth class, Diadelphia, and fourth order, Decandria.

Genus. The flowers of this herbaceous plant, differ very essentially from the phaseolus; they have Linnaeus's distinguishing mark of a lupinus; but, in other parts of the flower, and habit of the plant, the difference is very considerable. From the remarkable comparative length of the alae alone, I imagine it is sufficiently distinguished from every

every other flower, and probably it deserves to constitute a new genus; but this I leave to the determination of botanists.

Radix. The root is fibrous.

Truncus. The stem is herbaceous, equal, voluble, climbing, cylindrical, and naked, diverging into many branches, and rising to a great height, when properly supported.

Folia. The leaves are alternate and trilobate, rising from the stem and branches about the distance of twelve inches from each other. The foot-stalk is cylindrical, from six to fourteen inches long. The lateral lobes are obliquely ovate, obtuse, entire, and nervous, with short petioles, and two very small stipulae between the lobes. The middle lobe is smaller, ovate, both ends pointed, with the petiole much longer; and two small subulated stipulae.

Flores. From the axilla of the leaf, descends a pendulous solitary spike, from six to fourteen inches long, covered with long blood-coloured papilionaceous flowers, rising by threes in a double alternate manner, from small fleshy protuberances, each of which is a short pedunculus of three flowers. The partial foot-stalks are scarce
half

half an inch long. The flowers upon the apex of the spike are first in bloom.

Calyx. The involucre to every three flowers of the spike consists of three small, hairy, ciliated, deciduous leaves. The proper empalement is of one bilabiate leaf, with a bellied, gibbous, persisting tube. The upper-lip ovate, entire, and pressed a little backwards by the vexillum. The under-lip is trifid, acute, and more erect.

Corolla.—a. *Vexillum.* The standard is ovate, concave, gently reclinate and emarginate. It is about double the length of the empalement.

b. *Alae.* The wings are of an oblong lanceolated shape, double the length of the standard; and both sides connivent, with short furrowed, nectariferous unguis.

c. *Carina.* The keel is falcate, acuminate, compressed, closely shut, very narrow, and scarce longer than the wings, with a curved distinct apex.

Stamina. The filaments are diadelphous, nine united, and one separate, equal in length, and distinct above. The single filament, and four others, terminate in thick truncated points, having orbicular antherae inserted into them by
very

very short necks. Alternate with these, are five other filaments, much more slender, and of a subulate shape, having oblong and larger antherae. When the flower is in perfection, the filaments extricate themselves from the keel, by an elastic spring upwards, and press upon the standard.

Nectarium. There is a small tubular nectarium, with ten obtuse points, incircling the pedicel of the germen.

Pistillum. The germen is cylindrical, hairy, and almost the length of the empalement. The stile is filiform, hairy, and as long as the filaments. The stigma is globular and small.

Pericarpium. The fruit is a leguminous coriaceous pod, four or five inches long, crooked as the letter *s*, and densely covered with sharp hairs, which penetrate the skin, and cause great itching.

Semina. The seeds are five or six in number, nearly of the shape and size of a small bean, with the hilum near the middle of the seed.

Locus et Qualitas. It will grow in any soil; but it is generally eradicated from all cultivated grounds, on account of the hairs from the pods flying with the winds, and tormenting every animal

mal they chance to touch. If it were not for this mischievous quality, the beautiful spikes of red flowers would deserve a place in the best gardens.

Tempus. It flowers in the cool months from September to March, according to the situation.

From this accurate description, it appears that the couhage is the *Dolichos pruriens* of Linnaeus. Mr Kerr has said nothing with regard to its medical virtues. But, in confirmation of Mr Cochrane's account, we shall here present our readers with the testimony given concerning it by Mr Bancroft, in his essay on the natural history of Guiana in South-America, a work published at London some years ago. After mentioning the frequency of disorders arising from worms in that part of the world, and assigning some reasons for it, he adds: "But, from whatever cause these worms are produced, their number is so great, that the usual remedies are very insufficient for their destruction; for which reason the planters in general have recourse to the cow-itch for that purpose. From whence its use was first suggested, I am uncertain, but its efficacy is indisputable. The part used is the setaceous hairy substance growing on the outside of the pod, which is scraped off, and
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mixed with common fyrup or molasses, to the consistence of a thin electuary, of which a tea-spoonful to a child of two or three years old, and double the quantity to an adult, is given in the morning fasting, and repeated the two succeeding mornings; after which a dose of rhubarb is usually subjoined. This is the empirical practice of planters, who usually, once in three or four months, exhibit the cow-itch in this manner to their slaves in general, but especially to all their children without distinction; and in this manner I have seen it given to hundreds, from one year old and upwards, with the most happy success. The patients, after the second dose, usually discharged an incredible number of worms, even to the amount of more than twenty at a time, so that the stools consisted of little else than these animals. But, though these were indisputable proofs of its efficacy, I was far from being convinced of its safety. I observed, that the substance given consisted of an assemblage of spiculae exquisitely fine, and so acutely pointed, that, when applied to the skin, they excited an intolerable itching, and even inflammation; from whence I apprehended dangerous consequences from their contact with the coats of the stomach and intestines. Indeed, when mixed in-

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to an electuary in the manner in which they are given, their elasticity is so impaired, that they do not produce the same sensible irritation; but yet I could conceive no other quality on which their efficacy depended, especially after I had prepared both a tincture and decoction from the cow-itch, and given them to worm-patients, without any sensible advantage. Influenced by these suggestions, I particularly examined the state and condition of all such patients as I knew had taken the cow-itch, and yet can with the greatest truth declare, that, tho' prejudiced to its disadvantage, I was never able, either by my own observation, or a diligent inquiry, to discover a single instance of any ill consequence resulting from its use; which has been so extensive, that several thousands must have taken it; and as no ill effects have been observed, I think not only its efficacy, but safety, are sufficiently evinced to entitle it to general use; especially when we reflect on the uncertainty, and even danger, which attends other vermifuges. It is to be observed, that this remedy is particularly designed against the long round worm; whether it is equally deleterious to the ascarides, or whether it has ever been used against them, I am uncertain.

Upon

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Upon a former occasion, we took an opportunity of mentioning the success with which Mr Cruikshank of London had injected the kidneys of the human body. A correspondent in London has lately transmitted to us the following account of what has been done by Mr Hewson on the same subject.

Mr Hewson, in his autumn-course of anatomy, in the year 1772, when speaking of the structure of glands, maintained, contrary to Malpighi and his followers, that they were not furnished with cryptae or follicles. On injecting the excretory ducts of the breast, with a fluid coloured with vermilion, there was indeed an appearance at the end of the ducts somewhat like follicles. But, upon injecting these ducts with mercury, he found, that what had before appeared uniform round bodies, about the size of pin-heads, were small pieces of the gland, with an excretory duct dividing upon them into small branches, resembling what Ruysch calls the frenicilli of arteries. For, explaining the deception into which some of his ingenious cotemporaries had been led, he observed, that, from the smallness of these vessels, they could not, when injected with vermilion, be di-

distinguished from each other; that, being clustered together, they gave the appearance of bags; but that, when injected with mercury, they could readily be distinguished from the brightness of the fluid. This fact he demonstrates by means of a preparation. He farther observed, that the followers of Malpighi had, in general, produced the kidney to prove the existence of follicles; but he shewed in preparations, that the little corpora globosa, which most of the modern anatomists term bags or cryptae, are nothing else but convoluted arteries, agreeable to what Ruysch had affirmed. From Ruysch, however, Mr Hewson differed in some circumstances. He farther proved, by injections, that there is a serpentine vessel running between the corpora globosa, and the excretory tubes of the kidney, of which he promised to give an account on some future occasion.

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A very laudable scheme for building, near the city of York, an asylum for the reception of lunatics, is now in considerable forwardness. The committee, who have the conduct of that undertaking, have already purchased four acres of ground as a stance for the building; and they have

have contracted with masons, bricklayers, and carpenters, for different parts of the work.

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It is with singular pleasure we learn, that Dr Priestly continues, with indefatigable zeal, and uncommon success, to prosecute inquiries concerning the different kinds of air. He is soon to make a separate publication of all his observations on that subject.

Among many other discoveries which he has lately made, he thinks he can prove, that the electric matter is the same thing with phlogiston, only that it is in another state. These different conditions he illustrates, by comparing them to fixed air, when in elastic air, and when in chalk. He finds, that the electric fluid has the same effect on all kinds of air which phlogiston has; especially, that it makes common air deposite the fixed air which it contains, and that it renders fixed air immiscible with water.

By electricity also, he converts into inflammable air all kinds of oil, including aether, and likewise spirit of wine, and volatile spirit of sal. ammoniac.

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He finds, that, in all the cases where common air is diminished, which is never done but by means of phlogiston, there is a precipitation of fixed air, as may be discovered by lime-water. To this, however, the calcination of metals is an exception. There he imagines, that the calx seizes the fixed air; and, upon this principle, he accounts for the additional weight of the calx above that of the metal from which it is obtained. He obtains the purest fixed air from red lead.

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We formerly took an opportunity of mentioning some observations which had been made on the state of population in Manchester, by Dr Percival, a gentleman whose industry extends to every useful inquiry in philosophy as well as medicine. He has lately favoured many of his friends with a paper, intended for the royal society, containing some further observations on the same subject. In this paper, among many other curious particulars, we find a table, shewing the proportion of inhabitants dying annually in several different places. This table evidently demonstrates the pernicious influence of large towns on the lives of mankind. In the town of Liverpool, 1 in 27 die annually; in Manchester, 1 in 28; in East-ham,

ham, 1 in 35; in Chowbent, 1 in 41; in Cockey, 1 in 44; in Ackworth, 1 in 47; in Royton, 1 in 52; in Darwin, 1 in 56; in Edale, 1 in 59; in Horwich, 1 in 66; in Monton, 1 in 68; and, in Hale, only 1 in 69.

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Mr de Buffon of Paris is soon to favour the world with supplements to several parts of his natural history already published, particularly to his theory of the earth, his history of man, and his mineralogy. On this last subject, it is said, that he has many important discoveries to communicate. To accelerate these works, we are informed, that he has discontinued his history of birds, which will be completed by Mr Guenault.

Dr Hill of London has lately distributed proposals for publishing a new edition of the *Hortus Malabaricus*, which is justly esteemed one of the most valuable books in botany. This edition is proposed to be executed in such a manner, that the plates, numbers, and pages will exactly correspond with those of the folio edition; so that all references to the one will also suit the other.

A new periodical work in natural history is proposed to be published at Halle in Germany, under the title of *Naturae indagator*. Every volume will consist of four numbers, one of which will be published quarterly.

A third edition of Mr Pennant's tour in Scotland in the year 1769 will soon appear. It is to be published in quarto, with twenty-one new plates, and many new articles. His tour in 1772 is likewise soon expected. It will contain many plates, and will probably afford instruction and entertainment to every sincere lover of natural history.

The royal academy of sciences at Montpellier have proposed the three following questions as the subjects of their prize dissertations for the year 1774.

1. Determiner les differens titres ou degrés de spirituosité des eaux de vie, ou esprits de vin, par un moyen simple, et applicable au commerce?

2. Quels sont caracteres principaux des terres en general, et les moyens de remedier aux defauts de celles, qui sont peu propres a la productions des grains?

3. Quelle

3. Quelle est l'influence des meteoros sur la végétation, et quelle consequence pratique peut on tirer relativement a cet object, des differentes observations meteorologiques faites jusqu' ici ?

Dissertations on these subjects must be transmitted, before the 1st of October 1774, to Mr de Ratte, who is perpetual secretary to the society.

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Dr Christian Gottlieb Ludwig, professor of the practice of medicine at Leipzig, died there on the 7th of May 1773. He was deservedly eminent for his many valuable medical writings. And he had the merit of having first planned, and afterwards conducted, for more than twenty years, *Commentarii de rebus in scientia naturali et medicina gestis* ; a work too well known to stand in need of any encomium.

Dr George Matthie, one of the professors of medicine at Gottingen, died there on the 9th of May 1773. And, at the same place, on the 28th of May, died Dr George Gotlieb Richter, archiater to his Britannic Majesty, and primarius professor of medicine at Gottingen.

Dr Nicolas Roseen de Rosenstein, archiater to his Swedish Majesty, died at Upsal on the 16th of July 1773.

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On the 26th of July died at Paris, Mr Morand, a justly celebrated surgeon in that city, and a member of most of the noted academies in France.

On the 30th of December 1773, Mr William Anderson was admitted a member of the college of surgeons in Edinburgh.

At a meeting of the royal college of physicians in Edinburgh, on the 1st of February 1774, Dr Robert Hamilton of Lynn Regis, was elected a fellow. And, at the same meeting, Dr Edward Spry of Tottness, and Dr James Hunter of Edinburgh, were admitted licentiates of the college.

On the 9th of March 1774, Mr John Robertson, who has for some years been engaged in an academy established by the Empress of Russia at Cronstadt, was unanimously elected professor of natural philosophy in the university of Edinburgh, in the room of the late Mr Ruffel.

S E C T.

S E C T. IV.

List of New Books.

NOUVEAUX memoires de l'académie royale
des sciences et belles lettres. Année 1771.
Avec l'histoire pour la même année. 4to, Berlin.

The seaman's medical instructor. By N. D.
Falk, M. D. 8vo, London.

The chemical works of Caspar Newman, M. D.
professor of Chemistry at Berlin, F. R. S. &c. a-
bridged and methodized, with large additions,
containing the later discoveries and improve-
ments made in chemistry, and the arts depend-
ing thereon. By William Lewis, M. B. F. R. S.
The second edition, 2 vols 8vo, London.

Medical and chirurgical observations, as an ap-
pendix to a former publication. By Benjamin
Gooch, surgeon. 8vo, London.

Advice to people afflicted with the gout. By
J. Williams, M. D. 8vo, London.

Phar-

Pharmacopoeia officinalis extemporanea; or, a compleat English dispensatory. In two parts, theoretical and practical. By John Quincy, M. D. The fourteenth edition. 8vo, London.

Institutions of entomology; being a translation of Linnaeus's ordines et genera insectorum; or, systematic arrangement of insects; collated with the different systems of Geoffroy, Schaeffer, and Scopoli, together with observations of the translator. By Thomas Pattinson Yeats. 8vo, London.

Remarks on certain passages contained in a scurrilous pamphlet, published by Henry Saffory. By John Burrows, M. D. 8vo, London.

The friendly physician. By F. Spilbury chymist. 8vo, London.

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The

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A N D
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M E D I C A L
C O M M E N T A R I E S.

S E C T. I.

An Account of Books.

I,

Dissertation sur la Fièvre Miliare ; Ouvrage qui a obtenu l' Accessit du Prix de l' Académie des Sciences, Beaux Arts, et Belles Lettres a' Amiens, le 25 Août 1770. Par M. Planchon, Medecin a Tournai, 8vo, Tournai.

THE author introduces this dissertation with some quotations from Hippocrates, Ætius, and others, to prove that the miliary fever was known to the antients. He next relates the questions, proposed on this subject, by the academy of Amiens. These are,

P 2

Imo, A

1mo, A description of the miliary fever, the order and progress of those symptoms which point it out, and which accompany it through its different periods.

2dly, The distinction of the species of this fever, whether primary or symptomatic, mild or malignant, simple or complicated.

3dly, The nature and essence of the morbid cause of the miliary fever. Is it inflammatory or putrid? What analogies or differences may be pointed out between it and other exanthematic diseases?

4thly, Is the miliary eruption a crisis, or purification of the mass of blood which nature thus frees from some extraneous miasmata? Or, according to the celebrated De Haen, is the eruption only a factitious symptom, introduced by hot regimen?

5thly, What is the proper method of cure? Should we wait for the eruption, and favour its appearance? Or should we, with De Haen, endeavour to prevent it? If so, by what means is it to be effected?

6thly,

6thly, What diseases or complaints does the miliary fever leave behind it? And what are the means to be employed for preventing and curing them?

Our author, dividing his dissertation into as many articles as there are propositions here laid down, proceeds to treat of each in order. Having delivered the history, which will not admit of an abbreviation, he goes on to the second question. In answer to this, he first points out the particular symptoms which indicate the mildness of this disease, when it is considered as a primary affection. In this case, he observes that the horror and lassitude are such only as precede an ephemera; that the pulse is natural, and all the other symptoms moderate and without any delirium; and that, on the 7th, 9th, 11th, 14th, 17th, 20th, or 21st day, it is terminated by a copious sweat. Most frequently, however, this species is terminated on the 14th day.

The malignant species frequently comes on in a mild form, but in its progress great weakness, uneasiness, and internal heat supervene; these are accompanied with deep respiration, sighing, constant anxiety, and disturbed sleep. After this, the eruption appears; every thing then seems to

go on well; soon, however, the weakness again increases to a great degree, and is attended with subfultus tendinum, convulsions, low delirium, lethargy, and frequent faintings. When these last symptoms come on, the eruption disappears, and the patient has seldom above four hours to live. In some cases of the miliary fever, all these bad symptoms occur, even from the beginning, without any favourable appearances.

Dr Planchon next observes, that the miliary eruption is not always a primary disease, but that it is frequently a consequence of small-pox, of measles, of putrid, ardent, and malignant fevers, of inflammation of the womb, and of the gangrenous fore throat. It is said also to be symptomatic of an extreme rarefaction of the blood, and of plethora attended with much heat. Our author agrees with Hoffman in attributing it to intemperance, whether in diet or venery, and to constipation during other diseases; but he dissents from Hoffman's assertion, that it may likewise arise from the use of refrigerants; for he contends that experience has shewn them to possess a very opposite property. Mr Planchon's next observation is, that the miliary eruption, when symptomatic, is attended with the same appearances, as when it is

a primary disease. He then mentions another species of miliary fever, which is at first intermittent, and, unless particular attention be bestowed, is apt to become chronic. This species, he observes, is always attended with a red eruption. Upon these differences, in the species of miliary fever, a few observations which he offers on the prognosis are entirely founded.

When treating of the third question, Dr Planchon contends, that a consideration of the habits particularly disposed to miliary fever, and of the causes and symptoms of that disease, will not allow us to suppose that the morbid matter is of an inflammatory nature. On the contrary, he imagines that the most common cause of miliary fever is obstructed perspiration, which, being retained in the mass of blood, renders the serous and lymphatic part of it putrid and caustic. By this means, a fever is induced which throws part of the vitiated fluids upon the skin, but still leaves a part in the circulating mass, sufficient to support the fever during the whole course of the disease. By the time that the fever is brought to a period, it is either corrected by medicines, or expelled by the other excretories of the body. In proof of this, we are told, that several of the secreted fluids are

rendered remarkably acrimonious, particularly that the bile is often highly corrupted.

The circumstances influencing this eruption in such a manner, as to make it either red or white, are supposed by Dr Planchon to depend entirely on the constitution of the patient. The red eruption, he observes, attacks those who have abundance of impure blood, such as people labouring under a suppression of the menses or haemorrhoides, scorbutic patients, wine drinkers, and those who have led an inactive life. On the contrary, the white eruption, he maintains, attacks those whose blood is vitiated by bad serosity, such as relaxed or cachectic habits of all kinds; and, with these, the disease, he affirms is of a more putrid nature than when the eruption is of a red colour.

With respect to the analogy between this and other exanthemata, Dr Planchon observes, that, in point of malignity, it is not unlike to the confluent, chrystalline, and gangrenous small-pox, to measles of a bad character, to the gangrenous fore throat, and to erysipelas. Nor has it less analogy to these eruptions in the anxiety, oppression, sighing, and particular kind of respiration, with which it is accompanied. But the disease to which it has the greatest resemblance, is a fever with blisters, mentioned

mentioned by Sauvages. From this, however, it may be distinguished by the largeness of the pustules which attend the latter disease. From most others, it may, in general, be known by an acquaintance with the prevailing epidemic. From the small-pox, and measles in particular, it differs in the appearance of the eruption; for, in these diseases, the eruption appears at a particular day, but, in the miliary fever, no fixed day is observed. From the red eruption of the gangrenous sore throat, it differs too in continuing frequently till the 14th day; whereas, in the sore throat, the eruption seldom remains beyond the fifth.

To the fourth question, Mr Planchon answers, that the bad symptoms which follow the retropulsion of the miliary eruption, and the favourable circumstances which always succeed its appearance on the skin, abundantly prove it to be a crisis, or putrefaction of the mass of blood. He maintains, therefore, in opposition to the opinion of Dr De Haen, that it is not to be considered as a factitious symptom induced by hot regimen. On the contrary, he affirms, that patients whom he has seen labouring under this disease had not only avoided the hot regimen, but had used refrigerants to a considerable extent. In confirmation of this opinion,

opinion, he cites the authority of Dr Stork, who practises medicine in the same city with Dr De Haen. On this subject, however, he acknowledges that cordials, and hot regimen, will greatly augment the disease.

With regard to the cure of miliary fever, which is the subject of the 5th question, Dr Planchon observes, that it cannot be general, but that it must be varied according to the age, temperament, sex, and symptoms of the patient. He advises that bleeding be used with people of a sanguine temperament, with those who are plethoric and strong, who have a full, hard, tense, pulse, who have strong symptoms of fever and inflammation in the beginning of the disease, or who labour under suppressed evacuations of blood, and he recommends it in all cases, where there is no eruption. On the other hand, great weakness, with a small frequent pulse, continual spontaneous stools, and a free discharge of the lochia in women, immediately after delivery, are circumstances which, he imagines, if they do not entirely forbid the use of the lancet, should lead us to employ it with great caution.

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The necessity of evacuating the primae viae, in this disease, is pointed out by the nausea, vomiting, bitter taste in the mouth, furred tongue, foetid breath, and nidorous belchings, which occur in the beginning of this fever. With a view of producing this evacuation, Dr Planchon recommends an antimonial vomit. But, if the symptoms mentioned above do not occur at the beginning of the disease, he thinks it will be proper, in the first place, to order some digestive salts, with a view of giving a proper mobility to the crudities in the alimentary canal, and in that manner preparing for the exhibition of an emetic on the third or fourth day of the disease. This, he observes, in general, proves the most successful practice.

If, after the administration of an emetic, the crudities of the primae viae continue, with borborygmi, weight, and swelling at the region of the stomach, he is of opinion that an antiphlogistic purgative may be given, without any fear of retarding the eruption. He thinks that these symptoms require purging, even after the appearance of the eruption, especially if the patient have an irregular intermittent pulse, which, he apprehends, indicates an accumulation of bile, either in the hepatic system, or primae viae. The use of the
pur-

purgative, he considers to be contra-indicated, in those cases only, where an alleviation of the symptoms has taken place in consequence of the eruption, or of sweating.

Besides these remedies, he recommends diluents to supply the discharge by sweating; demulcents to blunt acrimony; refrigerants, such as acids and acescents, to moderate heat; diaphoretics to assist determination to the skin; anodynes to calm the agitation of the nervous system; and cordials, the chief of which are wine, camphor, and contrayerva, to support the strength of the patient, particularly in the malignant species of the disease. But, above all, he recommends camphor, which he considers almost as a specific, in the circumstance last mentioned. In case of a retropulsion of the eruption, camphor, opium, and blisters, are the most successful means of bringing it back.

When the fever is of a very malignant nature, and attended with great marks of putridity in the fluids, and debility in the solids, our author advises that Peruvian bark should be prescribed, which he thinks acts powerfully as an antiseptic, by restoring fixed air to the blood. He farther recommends, that the patient should be kept in a moderate

moderate degree of heat, that his linen should be frequently changed, and the air of his room often renewed and corrected by aromatics and vinegar. Diuretics, he imagines, may be used with advantage in all cases of the miliary fever, but particularly when it attacks women in child-bed. When this disease depends upon a superabundance and rarefaction of the blood, in consequence of summer-heats, and the abuse of spirituous liquors and cordials, he imagines that it should be treated in the manner recommended by Dr De Haen, by bleeding, antiphlogistic evacuates, and refrigerants.

Under the last head of inquiry, which respects those complaints which the miliary fever leaves behind it, our author observes, that the debility succeeding it should be obviated by wine and Peruvian bark. If there be a disposition to relapse, he advises the use of purgatives, in order to evacuate the morbid matter; and with the same view he thinks that cauterics may also be applied. He recommends demulcents for obviating acrimony, and the Peruvian bark and steel, for supporting the nervous system. Dropfical complaints, such as ascites, but more frequently anasarca of the legs, sometimes succeed miliary fever, which, according
to

to our author, proceed from a congestion of mor-
bific matter in the part affected. With a view of
removing these complaints, he prescribes purga-
tives, a nutritive diet, such a regimen as deter-
mines to the surface, diuretics, and tonics. If hec-
tic symptoms supervene, the remedies which he
esteems most proper, are bitters, spaw-water, and
milk-diet. When colic with constipation occurs,
laxatives are required; and, if the pains be violent,
opium will be necessary. For the dryness of the
skin, which frequently succeeds miliary fever, the
warm bath, we are told, is the most proper reme-
dy. The night-sweats are best counteracted by
wine, Peruvian bark, and stomachic martial pow-
ders, with bitter purging salts to open the belly, as
occasion may require. These stomachic pow-
ders are also, the author affirms, very advantageous
for counteracting that tendency to watchfulness,
which often disturbs convalescents from this dis-
ease; but, if they should fail in producing this ef-
fect, it becomes necessary to have recourse to opi-
um.

II. Ob.

II.

Observations and Experiments on the Poison of Lead,
by Thomas Percival, M. D. Fellow of the Royal
Society, and of the Society of Antiquaries in Lon-
don. 12mo, London.

MUCH has, of late, been written on the sub-
ject of lead, both as curing and inducing
diseases. Its influence in the latter of these ways
is the subject of the treatise now before us. The
industrious author begins with the enumeration of
many facts which shew that the deleterious powers
of lead are not confined to the human species, but
are equally exerted on quadrupeds and birds.
From these histories, it appears, that this metallic
substance has proved poisonous to hounds, cats,
linnets, geese, ducks, and other poultry.

It is a question of great importance in the prac-
tice of physic, whether the colica pictonum be e-
ver induced in the human species from the exter-
nal application of lead? Mr Goulard, and Mr Ai-
kin contend, that this does not happen; and their
opinion

opinion is greatly corroborated by the experience of the medical faculty, who employed saturnine lotions, with above fifty patients, who suffered from an accidental explosion of gun-powder at Chester. But, notwithstanding these facts, Dr Percival is still inclined to be of the opinion of Dr Baker, that lead, externally applied, will sometimes produce its specific effects upon the body. And, in support of the probability of this assertion, he relates the cases of several patients, in whom convulsive and paralytic symptoms supervened, after the external use of lead.

In the second section, the author relates many particulars respecting the cause and cure of the colica pictonum. From a great variety of facts, it appears, that it is brought on in men, birds, quadrupeds, and probably even in fishes, from the introduction of lead into the alimentary canal. When the disease is recent, the cure is in general attempted by emetics and gentle purgatives. In more advanced stages of the disease, these purgatives are frequently repeated, and oily clysters thrown up. Of late, the oleum ricini has been used with great success. The advantage to be obtained from these remedies has already been confirmed by experience.

perience. But our author here recommends the trial of another, which, he imagines, will be very effectual, both as a prophylactic for the disease in general, and as a cure for flighter cases. That is the use of alum. This practice, he suggests, from having administered it with the most happy effect in various obstinate affections of the bowels. It was then given to the quantity of fifteen grains every fourth, fifth, or sixth hour; and the third dose seldom failed to mitigate the pain, sometimes entirely to remove it.

In the third section, Dr Percival proceeds to determine, by experiment, several important questions, relating to the poison of lead. As water, impregnated with fixed air, acts as a menstruum both to calcareous earth and iron, the author suspected that it might exert the same property on lead. But, after endeavouring to produce such an impregnation, he could discover no mark of the presence of lead, by the addition of volatile tincture of sulphur, which is a very nice test of it. From the same test also, he could find no mark of the presence of lead in water impregnated with alum, which had been used as a menstruum for it. Notwithstanding this, however, he does not seem to be satisfied of the safety of keeping hard water in

leadens vessels, and particularly of using leaden pumps in wells of this kind of water, as in these there must be considerable friction.

Suspecting that Burslem pottery, commonly known by the name of Queen's ware, might receive its beautiful polish from a preparation of lead, he tried to determine this by experiment. Upon trial, he found reason to suspect that lead is an ingredient in Queen's ware; but it seemed to be dissolved by the vegetable acid, in a quantity so inconsiderable as to afford no objection to the use of that ware. He concludes, however, that vessels of it are improper for preserving acid fruits and pickles.

His next experiments were made with a view to determine the effects of white lead used as a paint. He found that it produced a remarkable diminution of the air, and rendered it capable of extinguishing flame and killing animals. This air, however, was rendered wholesome by agitation with water. Hence, he infers the propriety of placing vessels of water in rooms lately painted. He thinks, however, that sprinkling water through these rooms, by means of a garden-pot, would be still more effectual.

He

He found that slips of oil-cake, in the composition of which lead always enters, produced the same effect upon air as white-lead paint. And, as a further confirmation of this, he observes, that he has often found himself disagreeably affected from the use of an oil-cake hood.

As common sealing waffers are often coloured with red lead in place of vermilion, he cautions against their being swallowed, which is sometimes a practice with children.

To these experiments is subjoined an appendix, containing three letters. The first from Dr Haggarth of Chester, affords a striking proof of the good effects of Goulard's saturnine water, against burns and contusions. The second is from Dr Rotheram at Newcastle, who, while he practised at Hexham, was frequently consulted for the workmen employed in the lead-mines, smelting-mills, and refineries, in that neighbourhood. Dr Rotheram is of opinion that lead is highly poisonous, when its particles are so divided by heat, corrosion, or solution, as to enter the pores or absorbents of any part of the human body; but more particularly those of the lungs and stomach.

The third letter is from Dr John Carte to Dr Grew, and is dated at Manchester 27th of October 1678. This letter is extracted from Dr Hooke's philosophical experiments, published by Mr Derham. It gives a description of the Bel-land, a disease very common in Derbyshire among those who are employed in the lead smelting mills. This disease Dr Carte ascribes to the fumes of lead; but imagines that it is owing to a mixture of mercury in the ore. From this letter it appears, that these fumes are hurtful to other animals, as well as to men; and also, that they are injurious to vegetables. This treatise is concluded with a postscript occasioned by directions given in some modern books in cookery for recovering wine when sour, and preventing it from becoming so, by means of cerusse and of melted lead. These practices Dr Percival considers as having a most dangerous tendency.

III. *Richardi*

II.

Richardi Mead Monita et Praecepta Medica per multis Notationibus et Observationibus illustrata. Auctore Clifton Wintringham, M.D. C. M.L. et R. S. Socio, Equite Aurato, et Medico Regio, olim et Valetudinarii provisi in usum Britannorum, apud exteras gentes bella gerentium, Medico et Praefecto. 2 Tom. 8vo, London.

IN the notes and appendix subjoined to this edition of Dr Mead's *Monita et Praecepta medica*, Sir Clifton Wintringham delivers observations, drawn from his own experience, concerning the diseases treated of in the text. Without giving any analysis of Dr Mead's work, which has long been in the hands of every body, we shall here present our readers with such of Sir Clifton's observations, as appear to us to be the most interesting.

Concerning the solution of fevers, he observes, that no author has yet given any certain mark, by which we may know when or by what means a

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fever

fever is to be carried off. He affirms, we may be certain, that nature is endeavouring to effect some evacuation, if, at any period of a fever, without an evident cause, there suddenly ensues more full respiration, greater quickness and strength in the pulse, and a sense of tension in the hypochondria. What kind of evacuation is to ensue will be indicated by weight, pain, or itching, with heat in the part from whence it is to proceed. He adds, that although other evacuations may attend a crisis; yet it is seldom perfect without the assistance of a sweat diffused over the whole body, and attended with a strong and equal pulse.

Pleurisy, our author observes, principally attacks young people, and chiefly in the spring and winter. It may be produced by every thing which impells the blood, with greater force, or in a greater quantity than usual, into the arteries of the pleura, membranes of the ribs, or intercostal muscles, and by every thing which diminishes the capacity of these vessels. The cure is to be trusted to bleeding, which our author directs to be performed first in the arm, in order to diminish the general quantity of the blood; and afterwards in the foot, by way of revulsion.

When

When treating of intermittents, he denies that a lateritious sediment in the urine is a diagnostic mark of them, as he has often observed the same appearance in several other diseases. He cautions against confounding, with intermittents, those inflammatory or scorbutic pains, which are generally aggravated every night. They are to be distinguished, he observes, by the want of that horror, yawning, stretching, and cold, which generally induce an intermittent paroxysm. All anomalous intermittents, he observes, are to be treated as the symptoms which they put on may require, till they be reduced to some regular type; they may then be cured by the Peruvian bark. But if, from frequent attacks of the fever, the patient's strength has been much exhausted, it will be necessary to add to the Peruvian bark, some steel with bitter aromatic or diuretic herbs, as being the most effectual method of preventing a relapse.

Concerning slow hectic fevers, Sir Clifton Winttingham observes, that they may be referred to three causes: *1st*, Circumstances obstructing the passage of blood through the lungs. *2d*, Acrimony. *3d*, Inanition. He recommends balsamics, with a view to promote expectoration; but in the morning

ning only. With the same intention also, he advises the steam of warm water, of warm vinegar, or of squill vinegar.

The author thinks it of importance to point out the marks by which it may be known, whether epilepsy proceeds from a disease of the brain itself, or of some distant part of the body. In the idiopathic kind of epilepsy, he observes, that the head is always affected with heaviness, pain, heat, giddiness, sparkling of the eyes, and such similar symptoms. In this case, evacuation, regulated by the strength of the patient, is the principal remedy. In the symptomatic epilepsy, on the other hand, the affections of the head are seldom observed, and some other morbid affection is in general obvious; the removal of which carries off the epilepsy.

Besides these, the author observes, that there is another species of epilepsy, arising from a native debility of the nerves, and attacking tender girls and delicate women on the slightest agitation of mind. To such patients, he recommends bitters, steel, and exercise; and, if they have any hectic tendency, he advises that asses milk should be given them two or three times every day.

He

He observes, that it is particularly necessary, in the cure of madness, to attend to its cause. He adds, that the following composition given every fourth hour, so as to support a constant nausea, and gently loosen the belly, has proved remarkably serviceable. $\mathfrak{R}$ Rad. Hellebori nigri, Tartar. solub. ana $\mathfrak{z}\text{ii}$. Fol. senae $\mathfrak{z}\text{ss}$. Decoque cum aquae pur lbi . ad colatur. $\mathfrak{z}\text{x}$. Dein. add. Oxymel scillit. $\mathfrak{z}\text{iii}$. Syrup e spin. cervin. $\mathfrak{z}\text{vi}$. M.

Camphor, when given to the quantity of half a dram in the evening, he has found useful in lessening madness, procuring sleep, and bringing on a sweat. He also uses bleeding, gentle laxatives, and the warm bath. But he cautions against the use of opium, if given before the violence of the disease has been diminished by evacuations.

The author divides angina into three species, the watery, the inflammatory, and the contagious. In the inflammatory, he cautions against throwing gargles violently about the mouth; he would have them taken warm, and kept quietly in the mouth, that the vapours which arise may moisten the fauces. In the contagious angina, if there be pain in the head, and flushing in the face, the author advises to begin with bleeding and purging, although

though the state of the pulse may not seem to require these evacuations. He adds, that, if the skin be hot and dry, the pulse quick and hard, the Peruvian bark will be highly pernicious, and that it should not be given till the disease has remitted, or rather is going off. When the face and eyes are pale, when there is sickness of stomach, or a disposition to faint, with a quick weak pulse, bleeding and purging are to be avoided, a vomit is to be given, and, afterwards, cordials and anodynes, endeavouring, at the same time, to keep the fauces as clean as possible by means of gargles. Mild clysters must be injected during the whole disease; but care must be taken that a diarrhoea be not induced, as the patient's strength will be unable to bear it.

Another kind of angina contagiosa is mentioned by our author, in which the affections of the throat do not appear at first, but are the consequence only of a putrid fever. It is to be cured in a manner very similar to the former.

Our author does not agree with Dr Mead, in supposing that a country-life induces asthma with some people, by increasing the sensibility of the lungs. He ascribes it to the air being more
dense

dense in the country than towns. In consequence of this, it occasions a greater mechanical pressure on the vessels of the lungs, so that a greater congestion of fluids takes place in them than is consistent with free respiration. The causes of asthma, he ascribes, either to the vessels of the lungs, to the fluids passing through these vessels, or to a resolution or distension of certain parts and nerves which assist in respiration.

Sir Clifton Wintringham is of opinion, that Dr Sydenham erred in attributing the cholera morbus to summer fruits, and in restricting the period of its attack to the month of August. He affirms, that he has observed it in all seasons of the year, and even in people who have lived almost solely upon flesh. He does not deny, indeed, that it appears most frequently in August and September. But this he ascribes to the great differences in point of heat, at different times of the day, during that season, by which, matters which ought to have been discharged by the skin, are thrown back upon the stomach and intestines, and produce cholera. The cure which our author recommends, consists in bleeding, and large draughts of chicken broth or
barley-

barley-water, with clysters of the same, and anodynes, carefully avoiding every thing acrid.

In dysentery, the author objects to the frequent use of emetics, and proposes to cure the disease by bleeding, accommodated to the strength of the patient, emollient and oily clysters, mild cathartics, and anodynes. To prevent a relapse, he recommends astringents, bitters, aromatics, and balsamics; and, during the use of these remedies, he advises now and then a cathartic, followed by an anodyne.

When treating of ileus, he gives his testimony in favour of the good effects of tobacco-smoke injected into the intestines. He mentions also the following as a method which he has often found successful in removing the constipation attending that disease. He first orders an injection containing three ounces of antimonial wine, and then directs the following liniment to be rubbed upon the lower part of the belly, particularly about the navel: $\mathfrak{R}$ Medull. Colocynth. $\mathfrak{z}$ i. Ol. olivar, $\mathfrak{z}$ i. M. et coque leni igne, donec medulla crispari videatur; dein, massa adhuc calente, cola.

Concerning the cure of dropsy, our author observes, that, in recent cases, it should be attempted

ed by acrid, aromatic, and alkaline medicines, as these serve to stimulate and strengthen the patient. But, in the more advanced stages of the disease, he thinks that acids are more proper, on account of the putrefaction which then takes place, and frequently produces gangrene and haemorrhages.

The author supposes that urinary calculi very frequently, if not always, derive their origin from the rupture of some artery, a little blood being thus extravasated upon which the stone is formed. This opinion, he thinks, is confirmed, by the appearance of some red or brown spot in the centre of every stone, and by the many calculi which have been formed upon extraneous bodies lodged in the bladder. For the removal of a stone lodged in the ureters, he advises bleedings, emetics of squils, the warm bath, stimulating clysters, blisters to the neck and arms, mercurial purgatives, and exercise in a carriage upon rough roads.

Sir Clifton Wintringham divides pains in the joints into those attended with inflammation, and those which are without inflammation. The first he ascribes to cold, the last to acrid and thick humours,

mours, with such a state of the vessels, as will not permit them to pass with ease. The pains which are free from inflammation, he sub-divides into those which are attended with swelling, and those which are without it. These last are again sub-divided into the vague and fixed, the former generally arising from an acrimony of the fluids, the latter from causes which constrict or dilate the parts affected too violently. For each of these cases he points out what he esteems to be the proper method of cure, in which he does not differ greatly from the common practice.

Scrophula, according to our author, consists not only in a disease of the vessels in the part affected, but also in a lentor, and acrimony of the fluids which pass through them. For the cure, he advises calomel, taken in small quantities, and at proper intervals, with diluent and sedative decoctions of china-root, sarsaparilla, sassafras, or guajacum. He directs that mild cathartics should be given at times, and on those days which are free from purging, that the patient should use the warm bath or emollient fomentations, with friction of the part affected, in order to derive the mercury to the obstructed vessels. When these remedies have been used for some time, we are then

to

to have recourse to mineral waters ; and, in order to prevent a relapse, the Peruvian bark and steel should be taken after the cure is completed.

Our author supposes, that hypochondriac patients have always some obstruction of the spleen, because they are salacious, void much urine, and have great appetites, these being circumstances which constantly occur, although in a greater degree, to all animals who have lost the spleen. The treatment of this disease is to be varied according to the causes upon which it depends. When it proceeds from a sedentary life, the remedies, which our author recommends, are laxative mineral waters, antiscorbutic juices, mild mercurials, soap, thin diet, exercise, amusement, and, towards the end of the disease, steel. When it arises from debility, the cure is to be attempted by asses milk, chalybeates, Peruvian bark, and gentle exercise. When it arises from the suppression of usual evacuations, it is to be treated by moderate bleeding and purging, refrigerants, and anodynes, to these must be added such medicines as will restore the wonted evacuation, as bitters, aromatics, acrid gums, and cinnabar; and
cha-

chalybeates and Peruvian bark must be given to prevent a relapse.

The author attributes hysteria to a particular acrimony of the fluids joined to a certain thickness of them. He is of opinion, that the cure of this disease, during the paroxysm, cannot be reduced to any general rules. But, he observes, that bleeding, at the first attack of the paroxysms, and afterwards blisters, have been very successful with him in most cases.

IV.

Exercitatio Pathologico-Semiotica, de vespertina morborum exacerbatione. Vid Danielis Wilhelmi Trilleri Phil. et Med. Doct. &c. Opuscula Medica ac Medico-Philologica. Vol. 3. 4to, Francofurti.

IT has been matter of dispute among physicians, whether there be any particular period of the day, at which diseases in general are worse than

than at other times. Our author taking it for granted that there is such a period, and that this period is the evening, employs this dissertation in an attempt to investigate the reason of it. He introduces his subject, by observing that many diseases are peculiar to different seasons of the year. Hence has arisen, the division of diseases by the most early authors, into those of spring and autumn, of summer and winter. Proceeding, then, upon this foundation, he compares the day with the year, supposing the different periods of morning, noon-day, evening, and night, to correspond with the different seasons. Without enlarging upon other periods, he considers particularly the resemblance between autumn and evening.

From different authorities, he endeavours to prove, that autumn is the most unhealthy season of the year; hence he styles it the bringer of grief, and of fruit; the good natured, and the ill natured; the giver, and the robber. The same accidents, our author maintains, arise from the evening air, as from that of autumn. From the change which it undergoes, becoming suddenly cold, heavy, and moist, it affects the joints and nerves of the

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sick,

sick, stops perspiration, and shuts the pores of the skin. The same air also drawn into the lungs affects their tender fibres, and vesicles, and adds, as it were, a new disease to the old. This our author takes to be the cause of the evening exacerbation of all diseases.

After subjoining, from different authors, several remarkable instances of evening exacerbations, he concludes with expressing his assent to the truth of one of Hippocrates's aphorisms, in which it is asserted, that, in most diseases, the evening preceeding the crisis is the most troublesome and most griveous, in so much, that, in many cases, the patient often seems to breathe his last,

V. Exer.

V.

Exercitatio Pathologica-Semiotica de ingenti differentia vomicarum opertarum et apertarum. Vid. Danielis Wilhelmi Trilleri, Phil. et Med. Doct. Opuscula medica ac Medico-Philologica. Vol. 3. 4to, Francofurti.

FROM the title of this dissertation, the view of the author is sufficiently apparent. He defines a vomica to be pus tunicatum, which, he affirms, may exist of different sizes in every cavity of the body. While it remains whole, even although it be hid in any of the principal viscera, patients, ignorant of their impending danger, live without any convenience. But, upon breaking, it pours out virulent pus, which affects the neighbouring sound parts.

From this circumstance, our author imagines we are to account for the sudden death of many, who have before enjoyed good health. He is e-

ven of opinion, that a number of those patients, who are supposed to die apoplectic, would, upon a careful examination, be found to have been cut off by the bursting of a vomica in some of the viscera essential to life.

Hence, he insists upon the propriety of opening all those patients which become the victims of sudden death. In support of this opinion, he adds many histories of particular cases, from different practical authors, particularly from Nicolaus Massa, Dodonacus, Fernellius, Poterius, Tulpius, and Van Swieten.

VI. Joseph

VI.

Joseph Jacob Plenck *Sammlung von Beobachtungen uber einige Gegenstande der Wundarzneykunst.* 1ster Thiel. i. e. *A Collection of surgical Observations, by Joseph James Plenck.* 8vo, Vienna.

MR Plenck, whose writings are already well known to the medical world, has formed a design of publishing a periodical work in surgery. That he may render it more perfect, he invites men of learning and observation to communicate their remarks to him, which, if they shall be deemed worthy of publication, he promises to insert in the order they are received. One part of this work is already published, and contains dissertations on various subjects.

In the first essay, the author considers the plan of education best adapted, for forming an intelli-

gent surgeon. In the second, he treats of the effects of thunder and lightning on the human body. On this subject, many of his opinions are singular. He begins by enumerating the phaenomena, which thunder and lightning have been observed to produce on mankind. They frequently kill, without producing any external injury. Sometimes one in a company will suffer when all the rest escape. Others again are struck to the ground, but easily recover. They often occasion marks upon the skin, and in different cavities of the body; they give rise to paralytic affections; they occasion wounds similar to what are produced by musket-balls; they break the bones without doing any injury to the soft parts; they burn the cloaths, membranes, skin, and hair; and, in fine, will sometimes even reduce the whole body to ashes.

All these phaenomena, the author imagines, may be easily explained upon the supposition that thunder and electricity depend upon the same principle. For the electric fluid quickly penetrates, even the most solid bodies, and breaks whatever interrupts its course. Besides this, it produces a
remarkable

remarkable expansion of fluids. Upon these general effects, our author attempts to explain all the particulars above enumerated.

After these observations on the effects of thunder and lightning, he concludes the consideration of this subject, by delivering his opinion concerning the method of cure. As the affections, occasioned by lightning, are sometimes extended over the whole body, sometimes confined to particular parts, he divides the cure into universal and particular. The cure, he observes, is to be effected, by evacuating the vessels, by strengthening the system, and by abstracting the electric matter. For answering the first of these indications, he proposes blood-letting, and antiphlogistic purgatives; for the second, Peruvian bark; and, for the third, steel medicines, which he imagines will operate by attracting the electrical fire.

In the next essay, the author treats of gun-shot wounds. Here, likewise, he introduces the theory of electricity, and, from a diligent comparison of many of the phaenomena, arising from thunder, with those produced by shot, he is inclined to believe, that the ball communicates to the bo-

dy an electric shock. Upon this principle, with a view to repel inflammation, alleviate pain, and withdraw electric matter, he advises, that, besides the ordinary applications, gun-shot wounds should be fomented with water moderately warm, in which hot iron has been extinguished. He condemns the use of spirit of wine, and all emollient epithems, as increasing pain and preventing suppuration. Internally, he recommends antiphlogistic medicines, and, when the suppuration is once begun, the Peruvian bark.

The next subject of inquiry is the surgical use of opium. As opium is evidently acrid to the taste, and as it irritates parts to which it is externally applied, the author is of opinion, that it is rather to be classed among those medicines exciting heat, pain, and inflammation, than among those which refrigerate and stupify. He imagines that it is hurtful in every case of inflammation: He condemns its use, either before or after surgical operations: And he maintains that, in cancers, it greatly hastens the progress of the disease.

He does not, however, altogether deny the anodyne and stupifying power of opium. But he maintains, that these effects are not to be expected

ed from its external application, as he supposes them to depend upon its more volatile parts, which he imagines will not be absorbed, but will readily fly off into the air. On the other hand, he affirms, that, when taken internally, it not only acts as an anodyne and antispasmodic, but likewise irritates the nerves and vessels, and increases the motion of the fluids; and he is of opinion that its stimulant effects in this manner are by much the most considerable which it produces.

We are next presented with some observations concerning a wound in the diaphragm, about four fingers breadth from the back-bone. At first the pain was very inconsiderable, and it continued so till the second day after the accident. But at that time the patient, when going about his ordinary business, was seized with most acute pains, which continued till next morning, and then went off. They soon, however, returned again, attended with fever, swelling of the abdomen, and difficulty of breathing; and on the sixth day he died.

The body was examined after death, and a wound was discovered in the diaphragm, about an
inch

inch in length, rather towards the left side, but equally in the muscular and aponeurotic parts of it. Thro' this opening was found a portion of the colon in a mortified state, to which, our author imagines, we must attribute all the bad symptoms above enumerated, and even the death of the patient. Hence he concludes, that wounds of the diaphragm, of themselves, are not so dangerous as has in general been imagined.

The last subject here treated of is the use of Peruvian bark in surgery. Here the author has collected instances of its employment in gangrene, suppurations, wounds, and ulcers, cancers, scrophulous complaints, haemorrhagies, putrid fevers, spasmodic affections, diseases of the eyes, indurated tumours, and inflammations. To these observations, he premises a general disquisition concerning the constituent parts of the Peruvian bark; with regard to which, it is only necessary to observe, that he is of opinion it contains a considerable quantity of ferruginous particles, which he thinks is evidently proved from its being attracted by the magnet.

VII.

Rudimenta Pyretologiae Methodicae, Auctore C. G. Selle, M. D. 8vo, Berolini.

IT is universally allowed, that, in order to practise medicine with success, nothing is more essentially necessary, than that the physician should be able, with certainty, to determine under what disease his patient labours. That branch of medicine, which treats of this subject, has been termed Nosology. By practical writers, the consideration of it has been conducted upon different plans. But the singular advantages obtained in the different branches of natural history, particularly in botany, from following a general systematic order, as affording the means of readily distinguishing individuals from each other, has led to the hopes, that similar benefit would accrue from a methodical system of nosology. Hence it has been the wish of some of the greatest names in medicine, that an arrangement of diseases, productive

ductive of such advantages, might be obtained; and they have even expressed their hopes of the speedy accomplishment of this end, should the subject ever be studied with the attention which they thought it merited. The public, however, have hitherto been favoured with few attempts in this way. But even these serve to demonstrate, that a methodical system of nosology is both readily attainable, and highly useful.

The author, now before us, treats of the classification of febrile diseases only. He has here offered a new arrangement of these. A view of this we shall now present to our readers, without giving any account of the symptoms by which he endeavours to characterize each particular species of fever.

ORDO. I. CONTINENTES.

Genus I. CONTINENS Inflammatoria.

Species.

a. Simplex.

b. Complicatae.

a. Cum inflammatione locali.

I. Phleg-

I. *Phlegmons.*

1. Inflammatio oculorum.

a. externa.

b. interna.

2. Inflammatio aurium.

a. externa.

b. interna.

3. Inflammatio pharyngis

4. laryngis

5. asperae arteriae

6. linguae

7. pleurae

8. mediastinae

9. pericardii

10. diaphragmatis

11. pulmonum

12. pleurae et pulmonum

13. hepatis.

a. partis convexae

b. partis concavae

c. cystidis felleae.

14. Inflammatio lienis

15. cordis

16. renum.

a. vera

b. calculosa.

17. Inflammatio vesicae urinariae

18. uteri

19. ventriculi

20. intestinorum.

a. tenuium

b. crassorum.

21. Inflammatio mesenterii

22. omenti

23. intestinorum et omenti

24. cerebri.

II. Erysipelas.

III. Rheumatismus.

a. universalis

b. in juncturis

c. in lumbis

d. in coxa

e. in latere

f. in hypochondrio dextro.

B. Cum catarrho.

1. Catarrhus narium

2. pulmonum.

γ. Cum dysenteria.

δ. Cum exanthematibus.

1. Pestis

2. Variolae.

3. Va-

3. Morbilli
4. Febris scarlatina
5. urticata
6. Effera
7. Febris erysipelatoſa
8. miliaris
9. bulboſa
10. aphthoſa
11. petechialis.

G. II. CONTINENS putrida.

Species.

a. Simplex.

b. Complicatae.

«. *Cum inflammatione locali.*

I. *Phlegmone.*

1. Inflammatio pharyngis
2. pleurae
3. pulmonum
4. pleurae et pulmonum
5. hepatis
6. uteri
7. cerebri.

II. *Ery-*

II. *Erysipelas.*

III. *Rheumatismus.*

β. *Cum catarrho.*

1. Catarrhus narium et faucium
2. pulmonum.

γ. *Cum dysenteria.*

δ. *Cum exanthematibus.*

1. Pestis
2. Variolae
3. Morbilli
4. Scarlatina
5. Febris erysipelacea
6. Miliaria
7. Febris bullosa
8. aphthosa
9. petechialis.

ORDO II. REMITTENTES.

A. *Cum colluvia impura primarum viarum.*

G. I. FEBRIS biliosa inflammatoria.

Species.

a. Simplex.

b. Complicatae.

γ. *Cum*

a. *Cum inflammatione locali.*

I. *Phlegmone.*

1. Inflammatio oculorum

2. pharyngis

3. pleurae

4. pleurae et pulmonum

5. pulmonum

6. hepatis

7. intestinorum

8. intestinorum et omenti

9. renum.

II. *Erysipelas.*

III. *Rheumatismus.*

b. *Cum catarrho.*

1. Catarrhus narium

2. pulmonum.

c. *Cum dysenteria.*

d. *Cum exanthematibus.*

1. Pestis

2. Variolae

3. Morbilli

4. Febris scarlatina

5. urticata

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S

6. Ef.

6. Effera
7. Febris erysipelatoſa
8. miliaris
9. aphthoſa
10. petechialis.

G: II. FEBRIS bilioſa putrida.

Species.

- a. Simplex.
- b. Complicatae.

α. *Cum inflammatione locali.*

1. Inflammatio pharyngis
2. pleurae
3. pleurae et pulmonum
4. pulmonum
5. hepatis
6. ventriculi
7. inteſtinorum

II. *Rheumatismus.*

β. *Cum catarrho.*

γ. *Cum dysenteria.*

δ. *Cum exanthematibus.*

1. Pestis

2. Variolae

3. Morbilli

3. Morbilli
4. Febris scarlatina
5. erysipelatosa
6. miliaris
7. petechialis
8. aphthosa.

G. III. FEBRIS cum Colluvie Pituitae in Primis Viis.

Species.

a. Simplex.

b. Complicatae.

α. *Cum inflammatione locali.*

1. Inflammatio pharyngis
2. pulmonum
3. hepatis
4. ventriculi.

β. *Cum catarrho,*

1. Catarrhus pulmonum.

γ. *Cum dysenteria.*

δ. *Cum exanthematibus.*

1. Miliaria
2. Febris petechialis.

B. *Cum colluvie verminosa in primis viis.*

G. I. FEBRIS Verminosa Inflammatoria.

Species.

a. Simplex.

b. Complicatae.

α. *Cum inflammatione locali.*

1. Inflammatio oculorum

2. pleurae et pulmonum

3. pulmonum.

II. *Rheumatismus.*

β. *Cum catarrho.*

γ. *Cum exanthematibus.*

1. Febris erysipelatoſa.

G. II. FEBRIS Verminosa Putrida.

Species.

a. Simplex.

b. Complicatae.

α. *Cum inflammatione locali.*

1. Pleurae et pulmonum.

β. *Cum exanthematibus.*

1. Febris petechialis.

C. Ex

C. *Ex ulcere interno.*

Species.

1. Exulceratio pulmonum
2. Empyema
3. Exulceratio hepatis
4. lien
5. pancreatis
6. renum
7. uteri
8. oment
9. mesenterii
10. ventriculi et intestinorum.

D. *Ex obstructione viscerum.*

Species.

1. Hætica hepatica
2. mesenterica.

ORDO III. A T A C T Æ.

G. I. FEBRIS Nervosa Acuta Sporadica.

Species.

1. Phrenitis
2. Febris soporosa
3. Hydrophobia
4. Febris nervosa acuta puerperarum.

S 3

G. II.

G. II. FEBRIS Nervosa Acuta ex Contagio,

Species.

1. Sudor Anglicus
2. Pestis acutissima
3. Febris nervosa putrida,
 - a. Pestis
 - b. Stadium tertium febrium bilioso-putridarum.

G. III. FEBRIS lenta nervosa.

Species.

- a. Simplex.
- b. Complicatae.
 1. Variolae
 2. Morbilli
 - 3 Miliaria,

ORDO. IV. INTERMITTENTES.

G. I. INTERMITTENS Inflammatoria,

Species.

- a. Simplex.
- b. Complicatae,

1. Inflammatio oculorum
2. pleurae et pulmonum
3. pulmonum.

G. II. INTERMITTENS Inflammatoria Biliosa.

Species.

a. Simplex.

b. Complicatae.

1. Inflammatio pleurae et pulmonum.

G. III. INTERMITTENS Biliosa Putrida.

G. IV. INTERMITTENS Pituitosa.

G. V. INTERMITTENS Verminosa.

G. VI. INTERMITTENS Nervosa.

VIII.

New Observations upon Vegetation. By Mr Mustel, of the Academy of Sciences at Rouen, translated from the French. Vide Philosophical Transactions, vol. 63. part 1. 4to, London.

THE doctrine of the circulation of the sap of vegetables was once a matter of great controversy; and, however decisive the experiments of Dr Hales against such a system, may appear to others, the author of the present paper imagines, that they do not afford a satisfactory refutation of it. To ascertain this important point, Mr Mustel instituted an experiment, the event of which throws light, not only upon the present question, but likewise upon several others.

In the middle of winter, he placed, against the windows of a hot-house, several shrubs in pots, some within the house, and others without it. Through holes made for that purpose in the panes of glass, he passed a branch of each of the shrubs;

so

so that those on the inside had a branch without, those on the outside a branch within the house. After this the holes were closed and luted exactly. The appearances which this experiment afforded, led him to many conclusions.

The trees within the hot-house passed through all their changes during the winter; while their branches put through the panes, and exposed to the open air, underwent none. And the tree placed on the outside of the hot-house continued through the winter in the state of inactivity natural to all trees at that time; while its branches within the hot-house put forth successively buds, leaves, blossoms, and fruit. This even happened at a time, when the root furnishing these branches was in earth, so hard frozen, as to break the pot in which it stood; and when the top and stock of the tree were so covered with ice, that many of the branches were killed. In this case, therefore, a circulation could at most take place in the vegetating branches only. But even supposing that to happen, it could never be properly called circulation, as being confined to one limb. He concludes, therefore, that the circulation

tion of the sap in plants is not analogous to that of the blood in animals.

Another conclusion which he draws is, that each part of a tree is furnished with a sufficient quantity of sap to effect the first production of buds, flowers, and fruits. This he infers, because he thinks it improbable, that the branches in the hot-house derived their sap from the roots of the tree, at the time when it was buried in hard frozen earth. The consumption thus occasioned in the branch, would, he thinks, be supplied at the breaking of the frost. As a farther confirmation of this opinion, he observes, that vegetation goes on for some time in branches of trees broken down, at certain seasons of the year.

His last conclusion is, that it is heat which unfolds the leaves, and produces the other parts of fructification in the branch exposed to its action. This is evident from the leaves appearing only in those parts exposed to the action of the heat; which furnishes another argument against any circulation of sap taking place in vegetables, as it shows this sap to have been in motion only in particular parts.

Many

Many other consequences, the author observes, might be drawn from this experiment ; but these he delays mentioning at present ; and proposes examining them more at large in a treatise on vegetation.

In the course of the above experiments, three of the flower-buds of an apple-tree were gnawed by a snail in such a manner, that all the petals and stamina were destroyed, the flower being eat to the calyx. As the snail's progress was stopped here, the basis of the pistillum, and the embryo were preserved. Contrary to expectation, all the three bore fruit. The apples were perfectly formed, and, to the number of six or seven, of a pretty large size, upon a bunch. The snail had not touched some other bunches, each of which had ten or twelve flowers ; but, of these, not above one or two shewed any signs of fruit. This suggested to him the idea of obtaining fruit more certainly, by cutting off the petals when the flowers were full blown, in imitation of what had been done by the snail. With this view, he tried several experiments on apple, pear, plumb, and cherry blossoms, cutting off with scissars the petals close to the calyx. In almost every one of these

these cases, he obtained fruit, whilst several of the neighbouring flowers miscarried.

Mr Mustel, however, thinks it doubtful, whether the suppression of the stamina would not render the fruit barren, as the apples which he obtained from those flowers of the apple-tree, the stamina and petals of which were eat up by the snail, though they were large and beautiful, were found without the least appearance of seed, although the capsules were formed, as usual, at their centers.

IX.

An Account of the Discovery of the Manner of making Isinglass in Russia, with a particular Description of its Manufacture in England, from the Produce of British Fisheries. In a letter from Humphry Jackson, Esq; F. R. S. to William Watson, M. D. F. R. S. Vide Philosophical Transactions, vol. 63. part 1. 4to, London.

ISINGLASS, fish-glue, or ichthyocolla, is a considerable article of commerce. The fish, from

from which it is procured has been mentioned by several natural historians : But the proper method of manufacturing it has long remained a secret.

The author of the letter now before us introduces his subject, by observing, that Pomet, from whom many others seem to have copied their accounts, has greatly mistaken both the constituent matter and preparation of isinglass. From his account of the process, we are led to suppose, that it may be procured from every species of fish affording gelatinous principles. Trusting to the authority of chemical writers, Mr Jackson's attempts to discover the constituent parts of isinglass were at first without success. Glue, not isinglass, was the result of every process. A journey to Russia, with a view of discovering this secret, was as unsuccessful as his other attempts. But, by a steady perseverance, he, at length, not only gained his end, but, in the pursuit, discovered also a resinous substance, plentifully procurable in the British fisheries, which experience has confirmed to be possessed of the same properties.

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In considering this subject, Mr Jackson first gives the result of some experiments, which shew the impracticability of making isinglass by a previous solution of animal matters, according to the process delivered by most authors. He then shews, that it is nothing more than certain membranous parts of fishes, divested of their natural mucosity, rolled and twisted into various forms, and then dried in the air. This is proved by the following experiment: If long or short stapled isinglass be steeped for a few hours in cold water, and then untwisted, the membranes of which it is composed will expand, and reassume their former original hue. By a dexterous address, they may even be perfectly unfolded.

The finer sort of isinglass is prepared from the sounds, or air-bladders, of all sorts of fresh-water fish. In Muscovy, however, it is chiefly prepared from those of the beluga. The book, or ordinary staple isinglass, seems to be prepared from the intestines, and probably also from the peritoneum of the same kinds of fish.

The parts of the fish from which the isinglass is formed, particularly the sounds, are taken out while fresh and sweet, they are then slit open,
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washed from their slimy sordes, divested of every thin membrane which envelopes them, and afterwards exposed for a little to the air, that they may, in some degree, stiffen. When, in this state, they are formed into rolls of different length, and thickness, or into what is generally called Book and Cake Isinglass, and they are afterwards completely dried in the open air.

Our author imagines, that the peculiar shapes in which we at present find isinglass, were given it at first, with a view to disguise the real substance of which it consists. As this, however, in the British fisheries, would be unnecessary, he imagines it will answer every purpose in its native state, without any such preparation.

As a species of isinglass, procured from the marine fisheries, may be more immediately encouraged, Mr Jackson proposes a method of preparing it from the sounds of cod, and ling. The isinglass prepared from the latter of these fish, will admit of any shape; that from the cod of the book-shape only. From the cartilaginous nature of the sturgeon, it might be imagined that it should yield a large proportion of isinglass. Up-
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on examination, however, this is found not to be the case.

This paper is concluded with an account of the effects of isinglass on compositions of plaster, or lime, for ornamenting walls exposed to the vicissitudes of the weather. If it be dissolved in cold water, acidulated with vitriolic acid, and then mixed with the above compositions, it forms an indissoluble firm concrete of extraordinary strength and durability. In this composition, the acid quits the jelly, and forms with the lime a selenitic mass; while, at the same time, the jelly being deprived of its moisture, by the formation of an indissoluble concrete among its parts, soon dries, and hardens into a firm body.

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X.

An experimental Inquiry into the Figure and Composition of the Red Particles of the Blood, commonly called the Red Globules. Being a Copy of a Paper lately read before the Royal Society. By William Hewson, F. R. S. and Teacher of Anatomy. 4to, London.

SINCE the time of Leeuwenhoeck, the red particles of the human blood have, in general, been supposed to be spherical. This figure, however, has been doubted by Father de la Torr , and some others; and the industrious author of the dissertation now before us, whose labours, exerted with the most happy success for the improvement of others, have unfortunately proved fatal to himself, likewise controverts this opinion. Having made some new observations on this subject, he here presents them to the public.

He introduces his subject, by observing, that these particles in the blood are found very generally extended over the whole animal creation,

It is, however, by the assistance of the microscope only, that they can be discovered. In all the experiments mentioned in this paper, one excepted, the single microscope was employed, which, tho' inferior in magnifying powers to the compound microscope, is much superior to it in distinctness.

Mr Hewson affirms, that the human blood, or blood of other animals, diluted with serum; with water having one sixth, or one twelfth of any neutral salt dissolved in it; or with urine, when strongly impregnated with salts, shews the particles, improperly called globules, to be flat bodies, having a dark spot in the middle. And this figure, he observes, they not only shew in extravasated blood, but also in that circulating in the vessels of animals. The size of these particles, he observes, varies, not only in different animals, and in the same animal at different times, but even in the same animal, and at the same time. They are, however, upon the whole, largest in the skate, and smallest in the ox, mouse, cat, bat, and ass.

If blood be examined, when diluted with a stronger solution of neutral salt than that mentioned above, the particles appear shrivelled and
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contracted. If it be examined without dilution, as it flows from a vein, though spread very thin upon talk or glafs, it appears a confused mafs, in which the particles cannot be feen feperate from each other. It is, therefore, to proper dilution, that Mr Hewfon attributes his fuccefs in detecting the real figure of the red particles of the human blood. Leeuwenhoeck himfelf allowed, that, in fifhs, and amphibious animals, thefe bodies were flat and eliptical; and our author imagines it probable, that he concluded them to be fpherical in quadrupeds and in the human body, rather from theory than obfervation; for, as the blood which he examined was not diluted, he could not be qualified to defcribe them.

When the particles are diluted with water, they appear firft fpherical, and then diffolve. When they have affumed a fpherical figure, the black spot before feen in their middle, may be obferved fometimes to turn and roll from one fide to the other, and fometimes to ftick to the fide of the fphere, like a pea in a bladder. The diameter of thefe fpheres is lefs than their largeft diameter when in a flat fhape; and the blackifh bodies appear to be lefs foluble than the veficle containing

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them,

them, as they remain after the dissolution of the vesicles. From these observations, Mr Hewson concludes, that the particles of the blood are not, as Father de la Torr supposed, annular or hollow rings, and that the blackish spot, which he imagined to be a perforation, is a solid body contained in a vesicle, the sides of which are filled with a subtile fluid.

Blood, beginning to putrify, when diluted with fresh serum, or fresh blood diluted with putrescent serum, exhibits particles like mulberries, or rough spheres, the diameters of which are less than the largest diameters of the particles in a flat shape. In blood beginning to putrify, the particles sometimes break to pieces, and the black spot is fissured through its middle. These phenomena our author considers to be farther arguments against the annular structure of the red globules.

Mr Hewson maintains, that there is nothing regular in the number of parts into which the vesicles break; though Father de la Torr supposed each to be composed of seven joints, into which they regularly broke down; and Leeuwenhoeck imagined, that each globule consisted of six lesser ones.

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After these experiments on the blood diluted with pure water, and with water impregnated with different proportions of neutral salts, Mr Hewson concludes, that the use of the serum is to preserve the flat shape of the vesicles. And, from observing, that both a very strong solution, and a very dilute one, alter their shape, he thinks it probable, that nature has limited the proportion of water and salts in our blood ; but that in this proportion there is some latitude. He imagines likewise, that the mucilage of the lymph has some share in preserving the flat shape of the red particles.

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S E C T.

S E C T. II.

Medical Observations.

I.

*The Account of a very extraordinary Enlargement of
the Stomach, discovered upon Dissection. By
Mr Anderson Surgeon in Leith.*

A MAN, about sixty years of age, by trade a weaver, had, for a considerable time, complained of want of appetite, indigestion, flatulency, and pain in his bowels. In February 1766, he was attacked with an obstinate costiveness, which was with difficulty removed. After this, he continued in his usual state of health, till about the middle of July. He had then a return
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of the costiveness, attended with violent vomiting. The costiveness was again removed by proper remedies, upon which the vomiting ceased. But, afterwards, he had a periodical return of vomiting every evening between eight and nine o'clock; and he never had a stool without the assistance of an injection, which he got regularly every second night. In this way, he continued to linger till he died.

I obtained leave to open his body, and the preternatural structure, which I discovered, upon dissection, was of a very singular nature. When the abdominal integuments were laid aside, a large plain surface, extending from the sternum to the pubis, and from the one side of the abdomen to the other, was exposed to view. This uncommon appearance surprised those who were present; nor was their surprise diminished, when, upon examination, it was found to be the stomach enlarged to such a size as to fill the whole abdomen. Its fundus descended so far as to go within the pelvis. Here the small guts were entirely lodged. They were closely pressed together, and quite empty. The caput coli was in its natural situation; but, as well as the whole curvature of the

colon, it was covered by the stomach. The colon at the sygmoid flexure was very hard, and much thickened, so as greatly to straiten the canal. For about three inches in length, it was not wider than a goose-quill. Every other part of the intestines appeared to be in the natural state, and no scirrhus could be observed in any other viscus.

II.

The History of a Carcinomatous Ulcer in the Mouth, cured by the application of Leeches. By Mr John Bacon Apothecary in York.

MR F. P. a tobacconist in Wetherby, about 34 years of age, came to York to consult my father in May 1768, for an ulcer in his mouth, with which he had been afflicted almost for a twelvemonth. The left tonsil was nearly consumed, and the wound emitted a thin sanious offensive matter, attended with shooting pain. He had consulted an eminent physician at Leeds, and several others of the faculty.

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By their advice he had tried various remedies, but without any effect. My father, judging that the case might be venereal, ordered him a solution of corrosive sublimate mercury in brandy, with a decoction of sarsaparilla and tincture of Peruvian bark. These medicines he took for some time, but without any alleviation of his complaint.

The following month he returned again to York. My father now began to suspect his case to be cancerous; but, without communicating his suspicions, desired him to consult Dr Dealtry. The Doctor confirmed this opinion, and immediately put him upon a course of hemlock joined with mercury. He was also ordered a gargle, with extract of hemlock and pectoral decoction. With this, I used to syringe his throat, which was now become extremely offensive. He continued these remedies about a month; the cancer growing daily worse and worse. The discharge at length became intolerably offensive, and so acrimonious, that, upon touching the parts with a silver spoon, it was immediately tinged, as if it had been immersed in oil of vitriol; and the shooting pains were now extremely tormenting. Death indeed seemed to be the only probable means for delivering

vering the unhappy patient from this shocking and deplorable situation. I cannot say, that I ever remember to have seen it approach in a more hideous form.

He was very desirous of returning to his wife and family. But, being about to depart, an acquaintance happened accidentally to call upon him, who, upon being told that Dr Dealtry had given him up, desired he would consult an old woman, who at that time lived in York, and was famous for many cures in surgery. His friend was so very pressing in his solicitations, that he resolved to comply, although, as he has since told me, his faith was not very great.

The old gentlewoman inspected his throat; and, after bestowing a few sharp appellations on the faculty, she very confidently promised him a speedy cure, by observing the following directions. She ordered him to apply, under his tongue, as many leeches as he could place there at a time; and, after they dropt off, to put a roasted fig to the bleeding parts. This she told him to repeat at intervals, till he was perfectly well, which she again assured him, would be in a very short time.

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It was with difficulty he could be got home that night ; and, when he arrived, it was so late, that the application of the leeches was deferred till the next day. Four were then applied to the place directed ; every one of which, after remaining on about five minutes, dropped off dead. He found his throat immediately easier. The next day he had six leeches applied to the same place, which, after sucking for the space of about ten minutes, dropped from the part ; but some of them survived. His throat was now very considerably relieved, and he swallowed with much greater facility than before. A few days after this, he had a third application of the leeches, some of which also died.

The ichorous discharge, which was before intolerably offensive, gradually diminished, and became purulent. In fine, after pursuing this method for some time, every dreadful symptom vanished, and he became, to all appearance, perfectly well. He has continued free from his complaints ever since. But, after working too freely at his business, he now and then feels a pain in his breast, about the inferior edge of the serratus muscle, which shoots to his ear, and from thence

thence up the side of his head to his face. These pains, however, never affect him but upon neglect of bleeding with leeches, which he has generally done three or four times a year, ever since he had his disorder; and this practice always gives him immediate relief. He is in every other respect perfectly well, and has no glandular swellings in any part of his body.

III.

The History of a Case, in which a Tumour in the Abdomen, after Delivery, was imagined to be a second Child; but soon after spontaneously disappeared. By Mr John Aikin Surgeon at Warrington.

MRS P—, of a delicate habit of body, the mother of several children, was taken in labour in the night of October 23. 1773, and delivered of a small child, which appeared to have been a short time dead. The midwife, upon discovering that her belly continued much distended, suspecting that there was still another child, sent
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for me. I found the placenta lying loose in the vagina. I removed it; but, upon introducing my finger, I could not feel any other substance presenting. I then laid my hand upon the abdomen, and distinctly felt through the thin integuments, a large solid substance, of an irregular form, stretching high up above the navel. I made little doubt that this was a second child; and I thought I could discover the protuberances of its limbs, and the rest of its body. However, as there was no flooding, and as the patient was weak and fatigued, I did not think proper to attempt immediate delivery. After waiting, therefore, for some hours, as no labour-pains came on, I gave her an opiate; and left her under the care of the midwife.

I found her much in the same state next morning; but the tumour was something lower in the abdomen. I continued to visit her daily, and found no other symptoms but those usually succeeding labour. The after-pains were moderate; the lochial discharge was at first small, but afterwards very considerable in quantity, and of a slimy, foul appearance. The tumour gradually descended, softened, and diminished; and in less
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than a fortnight, it was quite imperceptible. The patient was at that time as well recovered as any of her weakly constitution could expect, after a common delivery. Her stools were regular, but the secretion of milk was but small, as had been the case with her at her last lying in.

On inquiry, I learned, that her belly was not observed to be enlarged before pregnancy; that she had been in a poor state of health during the course of her pregnancy, having continual pain in the region where this tumour was found, with thirst, hectic heats, and want of appetite. She had for some years past undergone a good deal of hardship and distress, from circumstances of misfortune. She was, at the end of six weeks after this delivery, in better health than she had been for many years before.

A practitioner of eminent skill and experience in this town informs me, that a case, almost exactly similar to this in its symptoms and termination, fell under his care some years ago.

IV.

An Account of singular Appearances from Affections of the Liver, in two Cases. By Mr James Hill Surgeon in Dumfries.

I.

A — L —, when about ten years of age, received a hurt on her side, by a fall from a horse. This was succeeded by swelling and hardness of her liver, and of all the epigastric region, which gradually increased for eleven years. For some part of that time, she was much affected with shortness of breathing; and coughed up considerable quantities of blood and pus, mixed with hydatic globules and their membranes. By these symptoms, she was so much reduced as to be able neither to stand nor sit; but was obliged to lie constantly on her left side.

Notwithstanding the discharge by cough, the swelling continued to increase, till her belly was as big as is usual at the end of pregnancy. At length two prominences appeared near each other,

a little below the false ribs. And, on the 13th of June 1752, they broke, by several small orifices, which discharged a considerable quantity of thin matter during that night. By next morning, three or four of these small orifices had fallen in to one, and made an opening as large as the palm of one's hand. Through this, upon removing the bandage, there sprung out three hydatides, each as large as a goose-egg. The cysts, though perfectly transparent, were so strong, that one of them did not break by falling on the floor. From this sudden discharge, she had almost fainted; but this was prevented by replacing the bandage. On the third morning, two more hydatides came away; besides these, several membranes were discharged, which seemed to have been hydatides of the same size. For eight days after, at every dressing, multitudes of smaller ones were forced out, especially if she coughed.

A large discharge continued from this orifice for nine months; and, for three months longer, it gradually diminished. The cough and spitting also declined, and were entirely gone, by the time the external orifice was healed. She continued, for thirteen years after this healthy and strong,
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being affected only with a shortness of breath upon walking quickly, and being grosser about the middle than formerly.

About the beginning of February 1766, three large tumours appeared on different parts of her abdomen; but they seemed to be seated no deeper than the muscles. They were attended with fever and excessive pain. After poultices had been for some time applied to them, the contents of one of them, which lay on the left side, between the spine of the ileum and the ribs, made their way into the intestines. After which, great numbers of hydatides, with a considerable quantity of blood and pus, were discharged by stool. The others broke outwardly; and, for three or four years after, at different periods, tumours appeared on different parts of the abdomen, from all which hydatides were discharged. Notwithstanding these threatening appearances, this patient obtained a perfect recovery, and is now alive, and in good health. For these four years past, she has been able to undergo the fatigue of reaping during the harvest, and of any other country-work.

II.

R—— S——, on the morning of the 30th of May 1770, walked about five miles to market, and returned in the evening. Immediately upon getting home, he complained of a most intolerable sensation of cold over his whole body, especially in his legs; but, to others, he felt rather warm. To this supervened other feverish symptoms, which were accompanied with a pain in the right side of his breast and belly. This pain was, in a few days, confined to the breadth of half a crown, in the region of the liver; but was excessively severe. Soon after, a cough came on, and he spat up phlegm for about ten days. This was succeeded by a discharge, which was generally of a yellow colour; sometimes, however, it was greenish, and, at other times, of a brownish cast. With it there were mixed bags, resembling the skins of gooseberries, which appeared to burst. This stuff came up both day and night; sometimes it was discharged to the extent of many ounces, as fast as he could spit it; at other times, he had an interval for some hours. Meanwhile he was extremely costive, seldom having above one stool
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in three or four days, without the help of medicines.

I did not see him till the 30th of July, which was about two months after the attack of his disease. I was then not a little surpris'd to find him coughing up mouthfuls of fluid bile. As I had never seen a similar discharge before, the novelty of the appearance induced me to examine it with great attention. There can therefore be little reason to imagine I was mistaken. I order'd him a saline mixture. But, a few days after it was done, a looseness came on, without any medicine. What he discharged by stool was as white as milk, and continued so for eight or ten days. He then recovered so far as to be able, on the 15th of August, to ride two miles from his own house. But, as he returned, he was seized with a violent fit of coughing, which lasted for about an hour; and, during which, he expectorated a considerable quantity of stuff, as red as brick-dust. After this, he recovered daily; and, on the 29th of May 1773, I saw him in perfect health.

From the above, and many more instances,

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which I have both seen and read of, may it not, with as much propriety, be said, that some people have hydatic constitutions, as that others have scrophulous or scorbutic constitutions?

S E C T.

S E C T. III.

Medical News.

DR PERCIVAL acquaints Dr Duncan, that he has tried the flowers of Zinc in several epileptic cases with good success; and that he has received the following account of the efficacy of this medicine from a physician of great and deserved eminence in his profession.

“ I have lately seen some remarkable good effects from the flowers of zinc in epileptic and spasmodic cases. A young woman, a patient of the Infirmary, had been subject to fits of the epileptic kind for a considerable time; which of late had increased so much upon her, that she could not be trusted by herself even for a moment, as she fell down often without the least

notice; and she had frequently four or five fits in a day. After gently opening her body with Pil. Gummof. and a little Aloes, I gave her Flor. Zinci gr. v. in syrup, thrice a day. After the first day, she entirely lost her fits; and, in a month, was discharged from the hospital. I have not heard any thing from her since; so that I suppose she is cured.

“ A girl, fourteen years old, was cured of a Chorea Sancti Viti, by taking gr. i. of that medicine night and morning; after two doses of the Pil. Rufi and Gummof.

“ A boy, sixteen years old, was received a patient at the Infirmary, for epileptic fits, supposed to arise from worms. He was put under a course of anthelmintics, which was continued for several weeks, without any advantage. I then gave him the flowers of zinc, at first, in doses of two grains thrice a day. This diminished the frequency of the fits; but, as they still returned, though with somewhat less violence, once in two or three days, the dose was increased to five grains. After this, he missed the fits for a fortnight; the dose was then increased to six grains; and he had afterwards no more returns for a month;

month; at the end of which time, he was sent home.

“ In some cases where the zinc has not entirely removed the fits, it has very much abated the spasms. I do not find that it promotes any evacuation, except that in some, upon being first taken, it occasions a little sickness, which goes off with a stool. It seems odd, that it should sit so easy on the stomach, since the metallic salt made from it, the Vitriol. Alb. is so violently emetic.

“ I cannot forbear mentioning, that the apothecaries, who do not make this medicine themselves, are very liable to be imposed upon. I lately saw a parcel sent from a druggist, which was a mere corrosion of the zinc, and indeed prepared with so little care, that the acid was not washed from it. This certainly would have proved a very rough medicine.

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From the high reputation which the columbo root has now acquired, the price of that medicine has of late been greatly raised. But it is more to be regretted, that there has been no fresh importation of it into Britain for a considerable number of years. It becomes therefore the duty of

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every physician and apothecary to be particularly attentive to what he prescribes or purchases. For, on the one hand, there is reason to apprehend, that, from the scarcity and advanced price, it will be much adulterated; and, on the other, it is but natural to suppose, that, unless kept with great care, it will have sustained much injury from time. Thus a valuable and efficacious medicine may be brought into unmerited discredit.

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We have seen a paper written by Mr Hill surgeon at Dumfries, concerning the ascent of water, and other fluids into the air. From this paper, it appears, that the doctrine which supposes evaporation to depend on the air acting as a menstruum to water was published by him in the Medical Museum in the year 1763, prior to its being published by any other British philosopher who has adopted the same opinion.

Dr Monro at Edinburgh has lately received from Mr Hill an insect, which was blown out of a gentleman's nostril. It was discharged alive, and continued in that state for some hours, creeping about slowly on a table. It was then put into ardent spirits; soon after which it died.

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This insect is about an inch and a half long, and seems to be of the Scolopendra kind, altho' it does not exactly answer to any description given by Linnaeus. It is singular, that Dr Monro has, at different times, received from several other gentlemen, insects of precisely the same kind, all of which were also blown from the nostrils of different persons.

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Mr Copland surgeon at Kirkcudbright has lately performed, with success, the operation of the trepan, as low down on the occipital bone, as to expose the integuments of the cerebellum. The patient was a man about thirty years of age, who became affected with stupor and paralysis, in consequence of a blow on the back part of his head. In performing this operation, an artery in the substance of the bone happened to be wounded, from which such a haemorrhage ensued, as obliged Mr Copland to desist, and to turn out a circle of bone a little lower down. After this was done, it appeared, that the skull had before received a considerable injury at that place. In consequence of this, an irregular growth in the bone had taken place; and he found it, at one part, no less

less than nine tenths of an inch in thickness. Hence, the head of the trepan could not penetrate through the whole thickness of the bone at once, it being, as usual, closed at the top, and not more than three fourths of an inch in depth.

The injury which the skull had suffered, as Mr Copland afterwards learned, proceeded from a fall upon the ice about two years before. No uneasy symptoms were at that time produced; and the patient, although sensible of an uncommon inequality in the bone, did not esteem it worthy of attention.

During the cure, a remarkable cineritious excrescence was produced from the mouth of the artery, mentioned to have been wounded in the operation. This excrescence, after being cut away, was repeatedly renewed. It exactly resembled, both in colour and consistence, those protrusions of the brain which have of late been so freely dealt with.

In this case it was singular, that the patient complained of every application to the back part of his head as exciting pain in the fore-head. From this, Mr Copland concludes, that there is a mutual decussation of nerves, not only from one side

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of the brain to the other, but from the fore to the back part of it, and the contrary.

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In a treatise, lately published at Amsterdam, entitled, *Description générale, historique géographique et physique de la Colonie de Surinam*, par Philippe Fermin, M. D. an account is given of two medicines, which are held in the highest estimation by the Indians in that part of the world. The first of these is named, *Balsam de Racaciri*. This balsam is the product of a tree growing in the neighbourhood of the river of the Amazones. It oozes from incisions made in the tree, and is preserved in calabasses placed for receiving it. It is esteemed by the Indians a sovereign remedy, as well against recent wounds as old ulcers. They apply it in the form of a plaster, as warm as the patient is able to bear it. They reckon it also an infallible cure for *fluor albus*, and gonorrhoeas of long standing.

Another remedy, mentioned in this treatise, which we think also deserves notice, is a tree called *Bois de Coissi*, a name which it is said to have derived from the negro who first discovered its medical virtues. The root of this tree is
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esteemed an excellent stomachic, restoring the appetite, and assisting digestion. But it is chiefly celebrated as an infallible remedy against even the most inveterate intermittents. It is said also to be used with great advantage and safety in every species of remittent and continued fever, with patients in all ages and sexes, and in all conditions, even during pregnancy, and the puerperal state. Before employing it, however, it is esteemed absolutely necessary to administer either a purgative or emetic. The method of exhibiting it, which is esteemed the best, is that of decoction. For this purpose, half an ounce of the bark of the root must be boiled in a close vessel with six pints of water, till one half be consumed. The decoction is then strained off, and a cupful taken every two hours, till the fever be entirely extinguished. Six or seven days after a cure is thus performed, it is in general necessary to repeat a purgative of any kind.

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Dr Percival at Manchester has communicated to some of his friends, several interesting observations on the state of population in the parish of Manchester, extracted from a paper which is intended-

tended for the Royal Society. The parish of Manchester, in the compass of less than sixty square miles, comprehends thirty-one townships, exclusive of the towns of Manchester and Salford. We formerly mentioned, that, last summer, an accurate survey had been made of the number of houses, families, inhabitants, &c. in the town. An enumeration, equally exact and comprehensive, has this spring been extended to the whole parish. From this, compared with the bills of mortality, it appears, that whilst, in the town, the yearly mortality is as one to twenty-eight, in the parish only one in fifty-six dies annually. Such a striking disparity between the healthiness of a large town and the country which surrounds it, will scarcely be credited by those who have paid no attention to such inquiries: And it must afford matter of astonishment even to the philosopher, when he reflects, that the inhabitants of both live in the same climate, carry on the same manufactures, and are chiefly supplied with provisions from the same market.

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Among the many premiums offered by the society instituted at London, for the encouragement

ment of arts, manufactures, and commerce, the following are so much connected with the subject of these commentaries, that we presume the mention of them will not be disagreeable to any of our readers who may not have already seen the list published by the society.

For raising, before the end of the year 1774, the greatest number of plants, not less than one thousand, of the *Rheum Palmatum*, or true Rhubarb, the gold medal.

For the next greatest number, not less than five hundred plants, the silver medal.

Certificates of the number of plants, that they stand at least six feet asunder, and that they have been in a thriving state during the preceeding summer, with an account of the soil, culture, and aspect, to be produced on or before the second Tuesday in February 1775.

The same premium is extended to the year 1775. Certificates to be produced on or before the second Tuesday in February 1776.

The same premium is extended to the year 1776. Certificates to be produced on or before the second Tuesday in February 1777.

For

For the best specimen of Rhubarb of British growth, equal to such as is commonly sold in the shops, under the name of Turkey Rhubarb, and not less than four pounds weight, to be produced, with an account of the culture and cure, on or before the first Tuesday in November 1775, the gold medal.

For the next best, being not less than one pound weight, the silver medal.

The same premiums are extended one year further ; specimens to be produced on or before the first Tuesday in November 1775.

To the person who shall raise from the seed, the greatest number, not less than one hundred plants, of the Orchis Morio Femina, or common Female Orchis, for the purpose of making Salep, the gold medal. Certificates of raising the plants, with an account of the method of culture, to be delivered, with a specimen of the roots, on or before the last Tuesday in December 1775.

To the person who shall raise from seed, the greatest number, not less than one hundred plants, of any of the large rooted Orchis, for the purpose of making Salep, the gold medal. Certi-
ficates

ificates of raising the plants, with an account of the method of culture, to be delivered with a specimen of the roots, on or before the last Tuesday in December 1776.

To the person who shall make the greatest quantity of good merchantable Salep, not less than five hundred pounds weight, from any kind of English Orchis, twenty-five pounds.

For the next greatest quantity, not less than three hundred pounds weight, fifteen pound.

For the next greatest quantity, not less than one hundred pounds weight, five pounds. A sample, not less than seven pounds weight, with certificates of the expence and manner of preparing it, to be produced on or before the first Tuesday in March 1775.

The same premiums are extended one year farther. Certificates to be produced on or before the first Tuesday in March 1776.

For the best specimen of Kelp, not less than one hundred weight, equal in quality to merchantable Spanish Barilla, to be produced to the society on or before the first Tuesday in January

1775;

1775, together with certificates of its having been made in Great Britain or Ireland; and of the sea weed commonly called Kelp, or Alga, the gold medal, or twenty pounds.

For the greatest quantity of merchantable Barilla, not less than one ton, made from the Spanish Kali, raised in Great Britain; to be produced on or before the first Tuesday in February 1775, the gold medal, or twenty pounds.

The same premium is extended to the year 1775. A sample of not less than twenty-eight pounds weight, with a certificate, that a ton has been made, to be produced on or before the first Tuesday in January 1776.

To the person who shall discover in Great Britain, Ireland, or the British American colonies, and bring into the port of London in the year 1776, the greatest quantity, not less than two hundred weight, of the native Fossil fixed Alkali, fit for the purposes of the soap-makers, thirty pounds. A sample, not less than fifty pounds weight, as got out of the earth, with certificates describing the place where found, to be produced on or before the last Tuesday in January 1777.

For discovering the best method of obtaining from sea salt, the Natron, or Fossil Alkali, in a pure state, fit for the purposes to which fixed alkaline salts are applied, and at an expence that will not render it too dear to be used in bleaching, soap-making, dying, and other great works, where pearl-ash, pot-ash, barilla, or kelp, are now employed, the gold medal, or fifty pounds. A sample of fifty pounds weight, and certificates that two hundred weight at least had been manufactured by the candidate; to be produced on or before the third Tuesday in December 1775.

For the greatest quantity of Black Lead, fit for making pencils, or black melting-pots, not less than six tons, produced in any of his Majesty's dominions belonging to the crown of Great Britain, and imported into any port of England in the year 1774, the gold medal, or thirty pounds. Certificates of such black lead being produced in some of his Majesty's dominions belonging to the crown of Great Britain; and also certificates from the proper officer of the port of such importation; with specimens of not less than fifty pounds weight, to be delivered to the society on or before the first Tuesday in February 1775.

For

For the best specimen of glass, not less than twenty pounds weight, for the general purposes of opticians, and superior to any commonly made, to be produced on or before the third Tuesday in December 1774, fifty pounds.

For the best method of preserving the seeds of plants in a state fit for vegetation, after having been kept a considerable time, such method being superior to any known to the public, and verified by sufficient trials; to be communicated to the society on or before the first Tuesday in December 1774, the gold medal.

For the best account, ascertained by proper experiments, of a method of destroying smoke at the end, or in the chimnies of fires belonging to large works, or fire-engines, in order to prevent annoyance; to be produced on or before the first Tuesday in February 1775, the gold medal.

For an account of the best and cheapest method of bleaching linen, being an improvement on the methods now in use; to be produced to the society with a sample of linen, not less than twenty yards, bleached according to such

method, on or before the second Tuesday in February 1775, the gold medal, or twenty pounds.

To the person who shall cultivate, in any part of his Majesty's dominions in the West-Indies, the greatest number, not less than twenty-five, of the trees which produce Camphor in the East Indies, the gold medal, or fifty pounds. Certificates, under the hand of the governor, lieutenant-governor, or chief magistrate of the island, specifying the number of plants, and that they are in a growing or thriving state, together with a branch of the tree, and some of the leaves, to be produced in the society on or before the second Tuesday in November 1776.

To the person who shall introduce into his Majesty's dominions in the West-Indies the greatest number, not less than ten, of the Quinquina, or that tree which yields the Peruvian or Jesuit's Bark, on or before the first day of January 1776, fifty pounds. Certificates, under the hands of the governor, lieutenant-governor, or chief magistrate of the island, specifying the number of plants, and that they are in a growing or thriving state, together with specimens of the bark and branches of the tree, to be delivered to the society

ciety on or before the second Wednesday in October 1776.

The same premium is extended one year farther. Certificates to be produced on or before the second Wednesday in October 1777.

All the premiums of this society are designed for England, Wales, and the town of Berwick upon Tweed, unless expressly mentioned to the contrary. All letters addressed to the society are desired to be directed to Mr Samuel More, the secretary, at the society's office, opposite to Beaufort-buildings in the Strand, London.

The medical society of London have resolved to give an honorary gold medal to the author of the best dissertation on fevers. The dissertations of candidates must be delivered to the secretary in Crane-court, Fleet-street, on or before the third Tuesday of April 1775. They must be written in a fair hand, and in the English or Latin language. Along with each dissertation must be sent a sealed packet, containing the name of the author, and his place of residence; some motto or device being written on the out side of this packet, and the same at the beginning or end of his dissertation.

This medal will be adjudged on the 5th day of June 1775; after which, all the dissertations, excepting that which obtains the honorary reward, shall be returned, with the packets unopened.

* * * * *

At a meeting of the American Philosophical Society on Friday the 21st of January 1774, the following new members were elected. The Right Honourable the Earl of Stanhope, the Honourable Lord Mahon, and Samuel More, Esq; of London; Dr Andrew Duncan of Edinburgh; the Honourable John Ellis, Esq; the Honourable Brian Edwards, Esq; and Dr William Wright of Jamaica; Bernard Roman, Esq; and George Gauld, Esq; of Pensacola.

At a meeting of the Royal College of Physicians in Edinburgh, on Tuesday the 3d of May 1774, Dr Edward Spry of Totness was elected a fellow.

On Sunday May 1st died at London, Mr William Hewson, surgeon, Fellow of the Royal Society, and teacher of anatomy. From those ingenious publications with which he has already
favoured

favoured the public, his untimely death will be regreted by every sincere lover of science.

On Friday the 3d of June died at Dumfries, Dr Ebenezer Gilchrist, a physician eminently distinguished for his extensive practice in the neighbourhood where he lived, and well known to the learned world by many valuable publications.

The following eminent physicians and philosophers have lately died abroad.

At Jena, Dr Christianus Theophilus Mayer, one of the professors of medicine in the university there.

At Dantzick, Michael Christophorus Hanow, professor of natural philosophy.

At Strasburgh, George Albrecht Fried, second professor of midwifery.

X 4

SECT.

S E C T. IV.

List of New Books.

Differtatio philosophica de aëre fixo. Auctor Diderico de Smeth, Amstelodamio-Batavo, 4to, Utrecht.

Differtatio philosophica, exhibens observationes quasdam de igne, et variis eum restituendi modis. Auctore Petro de Smeth, 4to, Utrecht.

Reimarus betrachtungen, *i. e.* Considerations on the instinct of different animals. By Herman Reimarus, published by his son, with notes, and an appendix concerning the nature of Zoophytes, 8vo, Hamburgh.

Ant. de Haen consil. et archiat. S. C. R. Majestatis, nec non medicinae practicae in universitate Vindobonensi professoris primarii, ratio medendi

di in nosocomio practico. Tomus 8. partem 14. complectens. Accedit ejusdem auctoris dissertatio Gallica, cui titulus, Refutation de l'inoculation, 12mo, Paris.

Ant. de Haen ratio medendi, tomus 9. sistens tomum primum rationis medendi continuatae in nosocomio practico. Accedit etiam epistola Gallice scripta ejusdem Ant. de Haen ad D. Hirzel, 12mo, Paris.

Essai sur l'usage de l'écorce du Garou, ou traité de effets des exutoires employées contre les maladies rebelles et difficiles à guérir. Ouvrage à la portée de tout le monde. On y a joint une dissertation médicale sur l'huile de tartar du même auteur. Par J. Agathange le Roy, docteur en médecine, medecin de Monseigneur le Comte de Provence, &c. nouvelle edition augmentée, 12mo, Paris.

Les amusemens innocens, contenant le traité des oiseaux de voliere, ou le parfait oiseleur. Ouvrage dans lequel on trouve la description de quarante oiseaux de chant, la construction de leur nids, la couleur de leurs oeufs, la durée et le tems de leurs pontes, leurs caracteres, leurs moeurs, &c. Traduit en partie de l'ouvrage Italien d'O. lina

lina, et mis en ordre d'apres les avis des plus habiles oiseleurs, 12mo, Paris.

An historical account of coffee, with an engraving and botanical description of the tree; to which are added fundry papers relative to its culture and use as an article of diet and of commerce. Published by John Ellis, F. R. S. agent for the island of Dominica, 4to, London.

An account of the testicles, their common coverings and coats, and the diseases to which they are liable, with the method of treating them. By Joseph Warner, F. R. S. and senior surgeon to Guy's hospital, 8vo, London.

All the prescriptions contained in the new practice of physick of Thomas Maryat, M. D. translated into English by J. S. Dodd, surgeon and man-midwife, member of the corporation of surgeons of London, and surgeon of his Majesty's royal navy, 8vo, London.

A description of the four situations of a gouty person, evincing the danger of trusting the gouty matter to the cure of nature. By P. de Vivignis, M. D. 8vo, London.

The medical miscellany; or, a collection of cases, tracts, and commentaries, exhibiting a view
of

of the present state of medical and chirurgical practice, and literature in England. The second edition, with an appendix. By T. Tomlinson, 8vo, London.

Minéralogie, ou nouvelle exposition du regne mineral ; ouvrage dans lequel on a taché de ranger dans l'ordre le plus naturel les substances de ce regne, et ou l'on expose leurs propriétés et usages mechaniques, &c. avec un lexicon ou vocabulaire des tables synoptiques, et un dictionnaire mineralogico-geographique. Par M. Valmont de Bomare, demônstrateur d'histoire naturelle, avoué du gouvernement, censeur royal, membre de plusieurs academies, maitre en pharmacie, &c. seconde edition, 2 vols. 8vo, Paris.

Examen et Analyse chimique de différens remèdes, que le Sieur Nicole et plusieurs autres emperiques, &c. mettent en usage pour la guerison des maladies vénériennes ; avec des observations sur la guerison des dartres, des ecrouelles, et de plusieurs autres maladies chroniques et rebelles, et la publication de plusieurs remedes efficaces dans la cure de ces maladies. Par M. D. F. Margues, chirurgien, 12mo, Paris.

Remede

Remede nouveau contre les maladies vénériennes, tire du regne animal, ou essai sur la vertu anti-vénérienne des alcalis volatils, dans lequel on expose la methode d'administrer ces sels ; avec des reflexions et des observations critiques tendantes a perfectionner les autres methodes. Par M. Peyrilhe, du college de chirurgie de Paris, &c. 12mo, Paris.

L'Hygiene, ou l'art de conserver la santé ; poëme Latin de M. Geoffroy, ecuyer, docteur-regent de la faculté de medecine de l'Université de Paris. Traduit en Francois par M. de Launay, docteur en medecine, 8vo, Paris.

Notationes et observationes in Richardi Mead monita et praecepta medica. Auctore Clifton Wintringham, M. D. &c. 8vo, Paris.

Francisci Xaverii Hartmann, collegiati medici Viennensis practici, &c. Formulae remediorum in materiam medicam et chirurgicam clarissimi viri ac celeberrimi Crantz, 8vo, Paris.

Animadversions on Dr B——'s treatise on the kink-cough ; to which is annexed, an essay on the whooping-cough. By Thomas Kirkland, M. D.

Infancy,

Infancy, a poem, book the first. By Hugh Downman, M. D. 4to, London.

Cases in the acute rheumatism and gout, with cursory remarks, and the method of treatment. By Thomas Dawson, M. D. late physician to the Middlesex and London hospitals, 8vo, London.

A chemico-medical dissertation on mercury, its various preparations and mode of operating, with observations on the use and abuse thereof in venereal disorders, &c. By J. L. L. M. D. 8vo, London.

Der Königlich Schwedischen akademie der Wissenschaften, &c. i. e. Transactions of the royal academy of sciences in Sweden for the year 1771, concerning natural history, husbandry, and mathematicks. Translated from the Swedish by Abrah. Gotthelf Kaestner, 8vo, Hamburgh.

Auserlesne medicinische, anatomische, und botanische abhandlungen der Römisch-Kayserl akademie der naturforscher, 10ter theil. i. e. Select treatises on medicine, anatomy, and botany, by the Roman Imperial academy of natural historians, vol. 10. 4to, Nürimberg.

Ber-

Berlinische sammlungen, 4ter band, *i. e.* Berlin collections, by Martine, 4th part, 4to, Berlin.

Deutsche schriften de konigl. societät. der wissensschaften zu Gottingen, 1ster band, *i. e.* German transactions of the royal society of sciences at Gottingen, part 1st, 8vo, Gottingen.

Der arzt der frauenzimmer. Eine medicinische wochenschrift, erster band, *i. e.* The physician for the ladies, a medical weekly paper, 8vo, Leipzig.

Bemerkungen der churpfälzischen physicalisch-oeconomischen gesellschaft vom jahre 1770. Erster und andrer theil, *i. e.* Observations of the physical and oeconomical society of the Elector Palatine, for the year 1770, first and second parts, 4to, Mannheim.

Abhandlungen und erfahrungen der franckisch - physicalischen - oeconomischen bienengesellschaft auf das jahr 1771, *i. e.* Transactions and experiments of the physical and oeconomical society for the management of bees in Franconia for the year 1771, 8vo, Nuremberg.

Abhandlungen und beobachtungen der oeconomischen Gesellschaft in Bern 1769, *i. e.* Transactions

actions and experiments of the oeconomical society in Berne for the year 1769, 8vo, Berne,

Mineralogische belustigungen zum behuf der chymie und naturgeschichte des mineralreichs. Sechster und letzter theil, *i. e.* Mineralogical collections for promoting the study of chymistry, and the natural history of minerals, the sixth and last volume, 8vo, Leipfick.

Abhandlung von potaschesieden und versuche zur bestimmung des wahren gehalts verschiedener pflanzen zur potasche, *i. e.* A treatise on the preparation of potashes, and experiments for ascertaining the true contents of plants for potashes, 8vo, Dresden.

Nachricht von der kriebelkranckheit welche im herzogthum Luneburg 1779 and 1771 grassiret, und wie selbige geheilet worden, *i. e.* A description of the raphania which prevailed in the dukedom of Lunenburgh in the year 1770 and 1771, with an account of the method of cure, 8vo, Zelle.

Offenbahrung naturlicher einfichten verschiedener heimlichkeiten, die wesenheit des magnets und aller magnetischen anziehungskraft, wie auch die verborgene und noch nicht grundlich genug
erkan-

erkannte heimlichkeit des feuers betreffend, *i. e.*
 An explanation of the natural history of the
 magnet, and of magnetical attraction, and of the
 hitherto undiscovered qualities of fire, 8vo, Leip-
 sic.

Zwo schriften von der aehnlichkeit der elect-
 trischen and magnetischen kraft und von den ei-
 genschaften des tourmalins, *i. e.* Two treatises
 on the similarity of electrical and magnetical
 power, and on the properties of the tourmalin,
 8vo, Graetz.

Traité des lésions de la tete, par contre-coup,
 avec des expériences propres à en éclairer la doc-
 trine. Par M. Méhée de la Touche, maitre de
 arts, et en chirurgie, ancien chirurgien major dans
 les armées du Roi, et chirurgien en chef des dif-
 ferens hopitaux Francois, 12mo, Paris.

A discourse on the best method of prosecuting
 medical inquiries; delivered before the medi-
 cal society of London at their annual meeting
 on Tuesday January 18th 1774, and published at
 their request. By James Sims, M. D. F. R. S.
 8vo, London.

A refutation of Mr Henry's strictures on
 Glafs's Magnesia; supported by a series of expe-
 riments,

ments, made under the inspection of many gentlemen of the faculty in the university of Oxford. To which is annexed, a recommendatory letter from the late celebrated Dr Huxham. By the present proprietor of Glas's Magnesia, 8vo, Oxford.

Philosophical transactions, giving some account of the present undertakings, studies, and labours of the ingenious in many considerable parts of the world, vol. 63. part 2. 4to, London.

Nature studied, with a view to preserve and restore health. Containing an explanation of the animal oeconomy, the nature and cause of diseases, and their cure; the uncertainty and pernicious effects of physic; the insufficiency of theory in the cure of diseases; nature proved to be the best physician; how to continue and restore health by simple and easy methods; with an account of a most powerful and safe deobstruent medicine, of great service in many diseases, particularly in asthmas, consumptions, king's-evil, and palsy, and in most kinds of fevers, &c. By William Smith, M. D. 8vo, London.

Experimental inquiries ; part the second ; containing a description of the lymphatic system in the human subject, and in other animals. Illustrated with plates ; together with observations on the lymph, and the changes it undergoes in some diseases. By William Hewson, F. R. S. and teacher of anatomy, 8vo, London.

The construction of timber from its early growth ; explained by the microscope, and proved from experiments in a great variety of kinds ; with figures of their various appearances ; of an instrument invented for cutting slices of extreme thinness ; and of a microscope of a new construction through which they are viewed. By John Hill, M. D. member of the imperial academy. The second edition, folio, London.

A treatise on child-bed fevers, and on the methods of preventing them ; being a supplement to the books lately written on that subject. To which are prefixed, two dissertations, the one on the brain and nerves, and the other on the sympathy of the nerves, and the different kinds of irritability. By Thomas Kirkland, M. D. 8vo, London.

An account of the late Dr Goldsmith's illness, so far as relates to the exhibition of Dr James's powder; together with remarks on the use and abuse of powerful medicines in the beginning of acute diseases. By William Hawes apothecary, 4to, London.

Experiments and observations on different kinds of air. By Joseph Priestly, L. L. D. F. R. S. 8vo, London.

Practical observations on the acute diseases incident to women. The second edition, corrected, with additions, and an index. By John Leake, M. D. member of the college of physicians London, and physician to the Westminster lying-in hospital, 8vo, London.

Medical memoires of the general dispensary in London for part of the year 1773 and 1774. By John Coakley Lettsom, M. D. F. R. and A. S. S. and physician to the general dispensary, 8vo, London.

Atti dell' academia scienze detta de fisico critici, tom. 4. Siena.

Pharmacopoea Helvetica, in duas partes divisa, quarum prior materiam medicam botanico-physi-

co-

eo-historico medice descriptam; posterior composita et praeparata, modum praeparandi, vires, et usum exhibet. Scitu et consensu gratiosi collegii medici Basileensis digesta, praefatus est Albertus de Haller. Accedunt syllabus medicamentorum in classes divisus, et duo indices necessarii, primus morborum et curationum; alter trilinguis, Lat. Germ. Gal. Folio, Basileae.

Christ. Allardi, Dissertatio de respirationis mechanismo. 4to, Groningae.

Memoire sur la maladie epizootique du pays Laonnois. Par. M. Augier du Fot, 8vo, Laon.

Dissertationes medicae quas ex auctoritate reverendi admodum viri Gulielmi Robertson, SS. T. P. Academiae Edinburgenae Praefecti; nec non amplissimi senatus academici consensu et nobilissimae facultatis medicae decreto; pro gradu doctoratus summisque in medicina honoribus et privilegiis rite et legitime consequendis; eruditorum examini subjecerunt

Gualterus Riddell, Bermudensis, De nosologia methodica.

Jacobus Gregory, Britannus, De morbis coeli mutatione medendis.

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Joannes-Tayloe Griffin, Virginienfis, De potio-
nis frigidae in morbis febrilibus ufu.

Philippus Turpin, Virginienfis, De epilepfia.

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A N D
P H I L O S O P H I C A L
C O M M E N T A R I E S.

By a SOCIETY in EDINBURGH,

Ego petentibus scripsi, non fastidiosis; gratis, non invidis; studiosis,
non oscitantibus.

HIERON.

VOLUME SECOND.

PART IV.

L O N D O N:

Printed for J. MURRAY, No. 32. Fleet-street;

W. CREECH, Successor to Mr Kincaid, and

W. DRUMMOND, *Edinburgh*; and T. EWING,

Capel-street, *Dublin*.

MDCCLXXIV,

M. I. D. I. C. A. L.

PHILOSOPHICAL

COMMENTARIES

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An Account of Books.

I.

THE examination, which is the subject of this treatise, was undertaken with a view of ascertaining the qualities of a root, to which, though now very generally used in aliment, pernicious effects have been ascribed. As an additional proof of the justice of the conclusions in this work, the author observes, that, while it lay twelve months in manuscript, under the examination

mination of delegates from the faculty of medicine in Paris, he repeated his experiments, with precisely the same events, as upon his former trials.

After finishing this work, Mr Parmentier presented it to the Comptroller-general, who delivered it to the faculty of medicine, to be considered by them. Accordingly, we find subjoined to the preface, a report to the Dean, from delegates appointed for examining it. This report is signed by Bercher, Degevigland, Macquer, Roux, Salin, and Darcet, who give it as their opinion, that the work is executed in a manner highly honourable to the author; and that, in the investigation, neither pains nor expence have been spared. They farther recommend, that the faculty return to the Comptroller-general this opinion of Mr Parmentier's publication.

In treating this subject, after some general reflections, the author observes that potatoes were first introduced into Europe, about the beginning of the 17th century, by the Irish, who brought them from America. At first, though used in aliment, they were cultivated only in gardens, as a matter of curiosity. Their culture was soon after introduced into England, Flanders, and several

veral other countries. And now they are planted in large fields, so as to become a principal part of the aliment of the poor.

Neglecting many differences among potatoes, the author contents himself with distinguishing them into red and white. Among other characters distinguishing these kinds, the former, he observes are more viscid and clammy, and have more taste than the latter, which, on the other hand, are more mild and mealy. After some remarks on the form, growth, and structure of potatoes in general, he observes, that those employed in the following experiments were always deprived of the shoots, fibres, and earth adhering to them; that they were of the red kind, knotty, of a middling size, and of the kidney shape.

After detailing a variety of experiments by boiling, he concludes, that the surfaces of these roots owe their red colour to an acid, and that this alone is the cause of their acrid taste. This he infers from observing, that they are acrid in proportion to their red colour; that they become insipid after it is extracted; and that white potatoes have not the least acrid taste.

Red potatoes, deprived of their first skin or epidermis, very readily yield their acrid part, giving

a red colour to acidulated water, a purple colour to an alkaline water, and a green colour to pure boiling water.

After these observations, the author next proceeds to a chemical analysis of potatoes. On this subject he began his experiments, by trying them in Balneo Mariae. When distilled in this manner, they yielded only an herbaceous liquor. By distillation over a naked fire, in stone retorts, two pound of potatoes left only one ounce and six drams of residuum, which by calcination was reduced to two drams and a half; and this, by solution and filtration, yielded one dram of fixed alkali. The remaining matter, after the filtration, weighed only one dram. During the distillation, there came over acid, oil, and a herbaceous liquor.

Mr Parmentier's next experiments for discovering the constituent parts of potatoes, were made by subjecting them to pressure. In this way, the first thing he obtained was a large proportion of water, which was of a brown colour and rendered muddy by a saline, gummy, or mucilaginous substance. This is called the essential salt, and was procured in one experiment in the form of crystals, but not sufficiently regular to enable

nable him to describe them. This substance seems to serve as a kind of seasoning or condiment; and it renders the root savoury, lighter, and of easier digestion.

The second part was a white insipid heavy powder; which, from a great variety of experiments, appears to be similar to the amylaceous matter of wheat. It shews the same phaenomena as that substance, when tried by chemical experiments, when used for stiffening linen, or other purposes in arts. The only difference seems to be, that the amylaceous powder of wheat is somewhat specifically lighter, and less transparent than that of potatoes.

A third article obtained from potatoes is, a fibrous, light, and gray coloured substance, insoluble in water, and with difficulty powdered. This part gives water, with which it is boiled, the consistence of glue; and no amylaceous matter can be obtained from it.

With regard to the proportion of these parts, it was found, that one pound of potatoes contained two ounces and a half of amylaceous matter, amidon, or fecula, six drams of the fibrous part, and an ounce of mucilaginous extract, all the remaining part being water.

After having thus tried to investigate the constituent parts of potatoes, our author's endeavours were next employed in attempting to discover a method of converting them into bread. But, before giving his own experiments on this subject, he relates what had been done with regard to it by others. Messrs. Falguet, Reville, Mustel, and Come, had made good and wholesome bread from potatoes, when mixed with the meal of barley, wheat, or rye, in different proportions. Mr Parmentier repeated the experiments, and made a number of other trials, by varying the proportion of the boiled pulp of the root, and of the meal from other grain. But, as great trouble and difficulty attended the using the roots in the manner directed by them, from the boiling, kneading, &c. that is required, Mr Parmentier was induced to think of other methods.

Potatoes, previously deprived of their skin, cut into thin slices, and put between paper, will dry in a heat, somewhat less than thirty-five degrees in Reaumur's thermometer; and, when thus dried, they will preserve their white colour. By this process they lose about two thirds of their weight, and they may then be reduced to a fine powder.

powder. A little of this powder thrown upon the fire sends out a smoke, accompanied with a smell resembling that of burnt bread. As this smell is perceived from all farinaceous vegetables when treated in the same manner, Mr Parmentier thinks it may be considered as the characteristic of the presence of an amylaceous matter. This smell, however, does not, he observes, arise from the amylaceous or fibrous part separately, but from both taken together.

The powder of potatoes obtained in the manner described above, has the smell and taste of wheat, and, like it, is devoured by rats and mice; but, even when most finely powdered, it has not the feel or brightness of flower of wheat, altho', on a chemical analysis, it yields the same products. It is also nutritious, and keeps well for a long time.

Finding so great a similarity between the meal of wheat and what may be called meal of potatoes, Mr Parmentier next endeavoured to make bread of them, when mixed in different proportions. His trials were made with one fourth, one third, one half, and two thirds of the potatoe meal, the remainder being flower from wheat. These proportions, with the addition of a little
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salt and yeast, yielded bread which was well tasted, but which had fermented little, was very brown, and covered with hard brown crusts. Bread made from the meal of potatoes alone, with the addition of salt and yeast, was eatable, but very heavy, unfermented, and exceedingly brown.

This bread from the meal of potatoes alone, was apt to crumble into powder. To give it more adhesion, he mixed with the meal a decoction of bran, or a mixture of honey and water, either of which made it lighter and more fermented; it obtained also a crust of a golden colour, and became well tasted, and sufficiently adhesive. Mr Parmentier obtained bread also well fermented, and of a good colour and taste, from a mixture of raw potatoe pulp, with meal of wheat or potatoe meal, with the addition of yeast and salt.

Having before attempted to ascertain the different constituent parts of potatoes, the author next endeavoured to determine how far each of them might be employed separately in making bread when mixed with flower of wheat. All the bread made with different proportions of the fibrous part was less insipid than that from the others, but it was always heavy and black. Bread
from

from the amylaceous part was well fermented and well tasted.

Mr Parmentier does not imagine that the starch of wheat has any advantage over that of potatoes. As a means of saving grain, therefore, he proposes that it should always be made of the latter. And, building upon Mr Baumé's examination of hair powder, he imagines that it might likewise be employed for that purpose.

Potatoes in any form, when used for making bread, are not readily disposed to ferment, without which, bread is very insipid, and not easily digested. But Mr Parmentier found, from a variety of experiments, that good bread might be made from equal quantities of flower and potatoe meal. He concludes, therefore, with recommending the mixture of potatoes, in times of scarcity, with the flower of wheat, instead of employing rye, barley, or oats, as has frequently been done.

When grain is altogether wanting, he recommends the use of bread made from a mixture of the amylaceous powder of potatoes, and of their pulp, this mixture being fermented with leaven, or with honey. The meal of this root, when diluted with hot water, acquires a tenacious and
glewy

glewy consistence. However fair the meal of potatoes may be, it always gives a gray colour to the bread made by mixing it with the flower of wheat. But a mixture of the pulp of potatoes with the flower of wheat, does not produce brown coloured bread.

Mr Parmentier next proceeds to examine, whether potatoes, like wheat, contain a glutinous animal matter; and if they do, whether it be similar to the other. Mr Beccari of the Bolognian academy, was the first who suggested that wheat contained a vegetable amylaceous matter, and a glutinous animal substance. This opinion has since been confirmed by Model, Kessel-Meyer, Speelman, Roux, Rouelle, and many others. Our author imagined that a similar glutinous matter might be obtained from potatoes, although this was rendered doubtful, from the slight degree of viscosity which the paste formed from them possesses, and from their being with difficulty made to ferment. In this attempt he did not succeed.

Mr Parmentier repeated Beccari's experiments on the flower of wheat, and found that the glutinous matter he could obtain from it was always in proportion to its coarseness. He found also, that bran, deprived of all farina, imparts a glutinous

nous matter to vinegar and spirit of wine. Bran, upon a chemical analysis, yielded a phlegm with the odour of mustard, an acid, a volatile alkali, and a tenacious animal oil; and the residuum, on calcination, gave a *sal marinus*. The same products, by a similar process, were obtained from the glutinous matter of wheat, when analysed by itself.

The experiments of Beccari and Kessel-Meyer, upon the nourishing part of farinaceous and leguminous seeds, had shewn that the gelatinous matter is only contained in the farina of wheat. Our author endeavoured to discover this matter in some kinds of bran that are said not to contain it. For this purpose, he, at first, followed the same process as that used with the bran of wheat, by which he got an acid empyreumatic vegetable oil, and at the end of the distillation, with some violence of fire, a small quantity of volatile alkali and thick animal oil; the residuum contained a small proportion of marine salt. In this experiment he used the bran of rye. He next endeavoured to discover it by the means which he had himself formerly employed on wheat. But in this way too, he was unsuccessful; neither did the
bran

bran of rye resemble that of wheat in other experiments.

The glutinous matter of wheat, thrown upon a red hot shovel, sent out the smell of the paste of flower. Exposed suddenly to a great heat, it stained the shovel as with oil; it swelled, grew yellow, then black, exhaling the smell of burnt horn. Put into boiling water, it swelled a little, and, after two or three boilings, lost its tenacity, became spongy, and was not capable of sending out the odour upon the shovel as before. Among other characters of the substance, it is not acted upon by diluted mineral acids, spirit of wine, or aether, but readily dissolved by vinegar. This glutinous or animal matter mixed with the farina of different feeds, and potatoes, as well as with the amylaceous matter, formed a paste which fermented well; the bread had a good taste and colour, and was sufficiently light. Decoctions of wheat-bran, made into paste, with different meals, produced a light, digestible, and well tasted bread. Bran of other feeds had not this effect. However useful and necessary a small quantity of the bran may be in producing a fermentation, it is found, that a large quantity has a contrary effect.

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After these observations on bran, the author proceeds to consider the meal of wheat. The more white the meal be, the more amylaceous matter it contains, and the more white, delicate, and nourishing is the bread from it. The more brown the meal, the more glutinous matter and bran it contains ; and the more sapid, heavy, and indigestible the bread, it is also much less nourishing. White meal is more absorbent, and specifically lighter than brown. Amylaceous matter is less disposed to corrupt than bran ; and therefore brown meal spoils sooner than the more white, in a moist cellar.

Wheat possesses one quality more than the grain of other plants ; for it is composed of *bran*, *glutinous matter*, *fermentable mucilage*, and *starch*. The two first are putrescent and oily, the two latter saline ; and the one of these is disposed to turn acid, the other is not affected by a moist atmosphere.

He next gives the chemical analysis of each of these substances ; and concludes, that, however white the farina be, it contains more or less of all the above four substances.

Mr Parmentier, *lastly*, made bread, very much like that of wheat, by a mixture of the following
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four substances, viz. four ounces of amylaceous powder of potatoes, one dram of mucilage extracted from barley, one dram of the bran of rye, and a dram and a half of glutinous matter dried and powdered.

From the very small proportion of the glutinous matter in vegetables, where it is found, from brown bread being less nutritious than white, from its not being found in such a great number of nutritious vegetables, and from the large proportion, and almost universality of the amylaceous matter in vegetables, our author concludes, that the glutinous matter is not the nourishing part of vegetables, but that the amylaceous matter has that property; and that vegetables are nutritious in proportion to the quantity they contain of that substance. Though we are not to consider the glutinous matter as the nutritious part of vegetables, yet it is a very necessary ingredient. It is that which preserves the cohesion of the paste in fermenting bread; it is that which forms the viscid pellicle, and stops the air in fermentation; gives the savoury taste to bread; occasions it to be light, to ferment, and which forms the small cells seen in it. It is found especially near the cortical part of grain; and this accounts for its being observed in the greatest quantity in coarse

coarse brown meal. It is this gluten which renders the wheat a superior aliment to the other grains and roots.

Mr Parmentier made many attempts to produce a beer, or spirit, by fermenting potatoes; but without success: He promises, however, to continue his attempts for that end.

The author next details some facts concerning the use of potatoes, when employed almost alone for aliment, during a very long time; and others concerning their agreeing with people who laboured under stomach complaints. In all these cases they afforded a salutary and nourishing food.

Potatoes are prevented from being frozen, by burying them deep in the earth, and covering them with straw. They do not appear to be injured by freezing, even repeatedly, provided they be gradually thawed. Moisture appears to be much more destructive, as they then soon sprout, and become hard, acrid, and fibrous.

Potatoes can never be useless: What is not wanted for aliment for men, may be employed for starch, feeding hogs, &c. The stalks may be mown before the flowering and feeding; and will be eat by cows.

The author next makes some remarks on the fecundity of the plant. In the *journal oeconomique* for October 1770, there is an account of one potatoe producing 140; of these 24 weighed from 12 to 16 ounces each; 60 were of an ordinary size, and the others very small.

M. Elleray having sown onions, and planted potatoes in March, upon land which he was preparing for other harvests, finding the onions had failed, cut off the stalks of the potatoes, and transplanted them upon the land on which the onions had been sown. By this means he had a double crop, and so fine as excited the admiration of all that saw it; nor were the roots from which the tops were cut at all damaged.

Mr Parmentier takes notice of the proposals that have been made by different societies, to encourage the cultivation of potatoes. It appears that they grow with little care in all soils, except the argillaceous, and in seasons when other vegetables are destroyed.

He next enumerates a great variety of vegetable preparations for food, into which potatoes may be an ingredient, or in which they are the only one. He quotes an authority, that the
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skins of potatoes may be employed for planting, and that it is doubtful if the produce be not equal to that from the roots themselves. The seeds also will produce potatoes, but they are small for some years.

Mr Engel recommends potatoes of a middle size to be used for planting, and which have but one eye.

Mr Parmentier next presents us with an account of the expences, and produce of potatoes, cultivated in two very different ways, by M. Dubois de Saint Hilaire. This gentleman was first induced to cultivate these roots with the view of feeding hogs, as at that time the country people would not employ them for food. He planted two portions of land, equal in quantity and quality, one by oxen and the plough, the other by men. He details particularly the different operations upon the land of each; and, upon summing up the expences, it appears that the expence was by far higher with men, than by the plough and oxen. Mr Dubois affirms that the expence is as 17, with oxen and plough, to 54 with men, and an equal product. But, with respect to the products of the two pieces of land above mentioned, it appears that an exceeding

fine crop was produced from the land cultivated with oxen and the plough, and a very poor one from the other. The next year, the same lands, and an additional piece, were planted with the plough and oxen, as before, with an exceeding fine produce. To ascertain the value of these roots, we have the price of hogs stated at the time they were put up to feed upon these roots, and their value after being fed.

Mr Parmentier again mentions some facts, tending to show the wholesomeness of potatoes to all ages: And he gives an account of a variety of dishes made from potatoes, in different shapes and mixtures.

The peasants reckon the following delicious food. Instead of boiling them, they put them into an earthen vessel, greased with butter, and roast them in an oven.

Among other preparations of potatoes, are a variety of confectionary goods. The author concludes with an account of an elegant entertainment which he made entirely of potatoes, to which he invited many of his friends.

II.

Medical and Ghirurgical Observations, as an Appendix to a former Publication, by Benjamin Gooch, Surgeon, 8vo, London.

IN the first part of this publication, the author gives an account of some of the most considerable epidemics which prevailed in the years 1739, 40, 41, and 42.

In consequence of a warm sultry summer and autumn, in the year 1739, a fever, of a putrid malignant nature, was produced, of which many died. The pulse in general was not very quick, but unequal and depressed; the blood lost its cohesion, and, in many, purple or livid eruptions occurred. Blood-letting and purging were found to be almost equally prejudicial: And, in general, the cure consisted in emptying the stomach and bowels with gentle vomits, glysters, and the mildest cathartics. Saline draughts were given with advantage; as also subacid and acescent liquors, such as cyder whey, Rhenish wine whey, and the like. The bark and elixir of vitriol were likewise found to be very serviceable. This

fever raged about two months, and totally ceased upon the coming on of the frost at Christmas. During the continuance of the frost, which was extremely severe from Christmas till the beginning of February, people in general were healthy; but, upon the thaw coming on, pleuritic and peripneumonic disorders, with coughs, were very frequent; which, in general, however, yielded to blood-letting and the usual antiphlogistic regimen. Towards summer, as the weather grew hotter, a disease, vulgarly-called the mumps, began to appear. It is a febrile disorder of the inflammatory kind, attended with swellings of the face, neck, and throat; the skin appearing of a colour somewhat deeper than a damask rose, but without pain. These swellings seldom terminated in abscesses; and, when they did so, upon opening, they healed kindly by the common treatment. The general antiphlogistic method of cure succeeded best: And when any thickness or hardness of the parotid or submaxillary glands remained, they yielded readily to small dozes of Merc. dulc. with gentle purges, at due intervals. A liniment of Ung. Caerul. mit. et Linim. volat. was likewise of use applied to the parts. In five or six cases, treated by the author, a metastasis of the morbi-
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fic matter to the testicles took place ; and the tumors there were attended with more pain, and removed with more difficulty : But all of them cured without ending in suppuration.

Soon after the mumps disappeared, another epidemic was introduced ; a fever which was evidently of the inflammatory kind, and yielded to the general treatment of inflammatory diseases. Blood-letting, in particular, was of the greatest service. By a letter from a gentleman, then on board the Royal Sovereign, in the bay of Biscay, we are informed, that this epidemic was not confined to one region or climate, but that it equally prevailed in different latitudes ; and that the cure consisted in the same general mode of treatment. To this inflammatory fever succeeded, in May 1742, a malignant one, attended with the gangrenous sore throat ; and which continued to rage in that part of the country for ten years. The patients could not bear blood-letting, purging, or the cool antiphlogistic regimen, so useful in other fevers ; but, on the contrary, cordials, alexipharmics, antiseptic gargles, with preparations of the bark, were found very serviceable. Our author, however, declines entering into any particulars of the disease, it having already been so

fully treated of by Dr. Fothergill, Dr. Huxham, and Dr. Wall.

After these observations on febrile complaints, we are next presented with some surgical cases and remarks. The first is a case of a fracture of the maxilla inferior; which, being improperly treated, produced a caries of that bone: So that it was necessary to take out about an inch of the whole substance of the bone, with one of the dentes canini, and one of the molares, still in their sockets. The cure, however, was soon effected, the space being filled up with osseous matter, which became so hard and firm as to admit of mastication without any uneasiness.

The two following cases are fractures of the skull; one from a fall, and the other from a musket-shot; both of which, however, did well, with the assistance of the trepan: And in one, the violence from the fall had been such, as to occasion a wide separation, the whole extent of the coronal suture; and at this part a fluid appearing under the dura mater, it was thought adviseable to divide it the whole length of the suture with scissars, which was from one temporal bone to the other. The operation, however, as was already observed, succeeded very happily.

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The two following cases are from gun-shot wounds, in both of which amputation of the arm was found necessary, one at the articulation of the humerus with the scapula, and the other at the fractured part of the bone, which too was very near the joint. In the former, the patient died from loss of blood, the artery not having been properly secured. In the latter case, the patient was seized with a fever, and did not recover. Mr Gooch, here, takes occasion to remark, that, with a very little attention, the course of the blood in the subclavian artery can be very easily stopped, by pressure upon the clavicle immediately above the little pectoral muscle; and he thinks, that a machine might easily be invented for that purpose, which would render amputations at that joint as easy as in any other part. The next is a case of empyema, from a bruise upon the breast; which was cured by a perforation into the cavity of the thorax. One of the ribs was found carious, and about two inches of the whole substance of it extracted. Towards the conclusion of the cure, a rib on the other side was fractured by a violent fit of coughing: But of this also the patient recovered.

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In compound fractures, where splinters of bones protrude, we are directed to saw off such portions. And a remarkable case is here mentioned, of a very bad fracture of that kind, which did well, and in which it was necessary to take off above two inches of the whole substance of the tibia. Another remarkable case of compound fracture is likewise mentioned, in which a violent haemorrhage occurred from an artery that run in the bony substance of the tibia ; which consequently could not be compressed, and which, from its situation, could not be taken up with a ligature. By the author's advice, however, a portion of the bone was taken out with the trephine, which laid the artery bare ; by which means it was properly secured.

A very remarkable case of a separation of the head of the femur from its neck, is next taken notice of. It occurred from a fall upon the great trochanter ; but being mistaken for a sprain, the case was improperly treated ; so that the limb continued much shorter than the other ; shrunk much from its natural size ; and the foot and toes continued to be turned outwards. Upon the patient's death, which happened not very long after the accident, the mistake was discovered by dissection ;

tion; and a figure of the appearance is here given by the author. In similar cases, he would recommend a constant gentle extention of the limb, with a plaster comprefs, or some proper pad, fecured by a roller, fo as to prevent the end of the bone from rifing out of its natural fituation.

The author then gives an account of a very fingular fwelling of the left ovarium in a woman of 25 years of age, who at that time too was pregnant. In the eighth month, however, being feized with violent vomitings, great pain, heat, and tendernefs of the abdomen, notwithstanding every thing that was ufed, ſhe died, and without being delivered. Upon diffection, the uterus was found mortified on the left fide, with a foetus of a natural fize and form contained in it, which did not appear to have been long dead. The ovarium on that fide was of the fize of a melon, and beginning to be mortified; and on being laid open, it was found to contain a full quart of an antheromatous matter, with a fatty fubftance of the fize of a turkey's egg, having a great quantity of hair intermixed with it, and at the bottom of the ovarium were two irregular bones, in one fide of which was fixed a perfect incifive tooth, with an imperfect

imperfect tooth adjoining; and in the other was a complete canine tooth.---A plate of the whole is exhibited.

The next case that occurs, is a very remarkable one, of a gentleman, who, for several years, had once or twice a year an attack of fever, which, along with other symptoms, was attended with a peculiar itchiness of his skin, but particularly of his hands and wrists, and which soon ended in a total separation of the cuticle from these parts. It could easily be turned off from the wrists down to the tops of the fingers, and so formed a kind of cuticular glove; plates of which we are here favoured with.

A case of universal emphysema from a fractured rib, is the next in order. The second day after the accident, a puncture was made into the thorax, which discharged a vast quantity of air and some bloody serum: The patient, however, died. There is a case mentioned too, which was suspected to be a collection of purulent matter in the cavity of the thorax. The patient having some time before that laboured under a peripneumony, which ended in an ulcer of the lungs, and a consequent spitting of matter. An opening, however, being made into the chest, nothing but
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air was found contained; and the patient recovered.

A case of a very large incysted tumor, reaching from the groin, along the labium pudendi, to the anus and hip, is next taken notice of. The whole was extirpated, and a cure obtained. In bronchocele's our author dissuades from excision, as he never saw any of them proceed so far as to endanger suffocation: And he takes notice of two or three cases that were like to have ended fatally, from the haemorrhage that succeeded the operations. In one of these indeed, the patient died, eight days after the operation, and evidently from the loss of blood.

In a collection of matter in the sinus maxillaris, an opening being made from the mouth, and a canula introduced, a perfect cure was obtained.

The next case taken notice of by our author is an opening into the stomach, through which the food and drink passed in considerable quantities, and which had been the consequence of a tumor situated on the region of the stomach, which came to a suppuration, and burst outwardly. The patient lived in that situation for several months; and was at last carried off by an accidental fever.

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Upon dissection, the stomach was found adhering all around the orifice to the peritoneum, which had prevented the aliments from falling into the cavity of the abdomen.

A very bad cancerous case in the mouth and parts about, is the next in order. It had proceeded originally from the patient using a pipe which had newly come out of the mouth of a person troubled with a complaint of the same nature. After every remedy had been used, and with no sort of advantage, the corrosive sublimate was prescribed; which being persevered in, a thorough cure was obtained. An opiate was conjoined, which our author maintains prevents the bad effects of that medicine upon the intestines.

In a short treatise upon cancers in general, which we are here favoured with, extirpation is recommended as the most certain practice: And we are told that the author has succeeded so far in this way, that, independent of scirrhus tumors of different sizes from the breasts of women of all ages, he has actually extirpated, with success, many entire cancerous breasts; two of which had even been for some time in an ulcerous state; and the patients had continued perfectly well more than ten years after.

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In operations of this kind he advises the incision to be made very large, so that there may be no sort of risk of any of the diseased parts remaining; and likewise, that an issue should be kept open, for a considerable time, in the neighbourhood of the part. In such cases, where operating is not thought adviseable, when attended with much pain, blood-letting and gentle laxatives are recommended, with the Peruvian bark, and saturnine applications externally. Our author has never observed any sort of advantage from cicuta in cancerous cases.

A very remarkable case of an enlarged diseased liver, is the next of importance that occurs. Upon dissection after death, that viscus weighed twenty eight pounds, though the patient from whence it was taken was below middle size.

A patient complaining of a violent acute pain in the rectum, internal piles were at first suspected; but, upon introducing the finger, a stone was felt, which being cut upon through the sphincter ani, was easily extracted, though upwards of an inch in length, and of the thickness of the little finger. An abscess had some time before that formed in perineo, which had been opened, and in which it was supposed this stone had been lodged;

lodged ; but having got out of its course, it had fixed itself in the rectum.

A very singular case is mentioned, of a man who no sooner went into the sun than his skin began to be tickled, attended with an uncommon heat ; it became stiff as leather, and as red as vermillion. Cold bathing and many other remedies were tried, but with no advantage : At last, however, a cure was performed by small dozes of calomel, together with lenient purgatives, and a proper attention to the *non-naturals*.

In a nephritic case, attended with a vast discharge of blood from the urethra, feverishness, constant vomiting, and purging ; after every thing else had failed, a large doze of solid opium had the effect to stop the vomiting, procured sleep ; and the patient thereby recovered.

A remarkable case of a man who never slept, is taken notice of in a letter from the author's friend at Madrid. The person enjoyed a very good state of health till his death, which happened in the 73d year of his age. He had a kind of dozing for about a quarter of an hour, once in the 24 hours ; but even that was not found, tho' it was all the sleep he was ever known to take.

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In a letter from Dr Monsey to the author, is narrated the history of a case of palsy of the left arm, attended with a very acute pain, extending from the thumb up to the middle of the humerus, where it stopped. Almost every sort of medicine and application had been made use of, but with no effect; and the only thing that afforded any relief was gentle tapping just at the junction of the last vertebra of the neck with the first of the back. At last, however, rattle snake wine was ordered, which happily produced a cure. In the same letter too, we are informed of a case of leprosy cured by this medicine.

In a letter to the author from Mr Revans surgeon at Halesworth, is described a very singular case of a puncture through the cranium, in a child, by a pair of sharp pointed scissars, into which a probe could easily be introduced full two inches, and from whence was discharged a vast quantity of serum, for several days, at the rate of thirty-six ounces in the twenty-four hours. Upon the stopping of this discharge, the child was seized with drowziness, convulsions, &c. when it was thought adviseable to apply the trepan, which however, did not produce any discharge of serum; nor did opening the dura mater have that effect.

At the time of writing this letter, however, the child was in good health, and the wound looked well.

III.

Traité d'Odontalgie, ou l'on présente un Système nouveau sur l'Origine et la Formation des Dents, une Description des différentes Maladies qui affectent la Bouche, et les Moyens de le guerir. Par Pierre Auzebi, Dentiste à Lyon, 12mo, Lyons.

TO this work are prefixed many ample recommendations of it, by a number of physicians of the first eminence at Lyons, who extol it for its ingenuity and merit. From the following account our readers may be enabled to judge how far it is entitled to such encomiums. It consists of eight chapters; in the first of which we are presented with the anatomy of the mouth.

In the second, Mr Auzebi gives a new idea of the origin and formation of the teeth. He refuses that the opinion of the growth of bones in general, as depending on the extention and development of membranous germs, can be applied to the teeth. In whatever period of growth a bone

bone be examined, the same form is observed in it, and all its parts are developed at the same time, in due relation to one another. On the contrary, the parts of a tooth are formed in succession; and, according to our author, one part acquires its whole bulk, while another is yet unformed. He farther observes, that in caries of bones, the carious part, in consequence of the oscillations of the vessels in the sound bone below, falls off, and gives place to a new growth. Whereas, in the teeth, if the enamel be broken, they become carious, like other bones; but this caries continues its progress; and no remedy can separate the sound part from the unsound. This, he imagines, is a proof that there are neither fibres nor vessels in the substance of the teeth; and he concludes, that they must have a different conformation from other bones.

After these observations, Mr Auzebi proceeds to give his own system of the formation of the teeth. But, previous to this, he observes, that the lymph can, of itself, form hard and solid bodies, especially when in a situation where it is exposed to the action of heat. By this means, he imagines the serosity will be evaporated, and there will remain only such parts as, by a pro-

per position of their surfaces, can join and unite strongly with each other. In his opinion, therefore, all that is necessary is, to shew how the secretion of lymph is made into the sockets, and in what manner the lymph takes invariably the form of different teeth. To account for this Mr Auzebi observes, that the nerves and vessels of the teeth, having advanced as far as the middle of the sockets, join together, forming a kind of cord, and afterwards lose themselves upon a musculo-membranous vesicle, which anatomists have called chorion, and which they have in general supposed to be the germ of the teeth. He imagines, that the arterial ramifications, which end at this vesicle, deposit into its cavity a certain quantity of blood, which not being carried off so quickly as it is brought, is under a continued pressure.

From this pressure, he affirms two different effects follow. *First*, the blood dilates and opens the pores of the membrane which compose the vesicle, and by this means, fits them to receive the lymph, which, as being the vehicle of the red part, is in its nature a very fine fluid. And, *secondly*, the vesicle, by its contraction compressing the blood, accelerates the separation of the lymph, and forces it to pass through its pores, which
from

from their smallness, will not admit the red globules. He supposes that the lymph thus separated and forced out of the vesicle, is poured into the socket, where it hardens, and by degrees forms the teeth. According to our author, therefore, it is not by the root that the teeth begin to be formed; but by the opposite end, and even by the enamel; which, after acquiring its full extent, becomes thicker, by new strata applied internally, till the body of the tooth be completely formed. After this, the osseous juice continuing its course into the socket, and finding no more room, diffuses itself under the vesicle; and after covering it, surrounds the cord of vessels belonging to the tooth, and forms a small spindle, which reaches to the bottom of the socket, and is what is called the root of the tooth. The number of roots, therefore, which any tooth has, will correspond to the number of cords which ended in the vesicle.

With regard to the figure of the teeth, our author observes, that it depends upon the interior configuration of the socket, and some other circumstances. He supposes, for example, that the incisores are flat, because the jaws are very thin at the anterior part. They are thin, and cut ho-

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rizontally

rizontally at their extremities, because, from the mouth being shut, and the gums pressing mutually on each other, they are forced to take a level form. The canini are pointed, because, from the rise of the incisores, this pressure is prevented. The molares have several inequalities, which depend on the disposition of the gum, and of the other parts to which they are applied.

This theory of the formation of the teeth, Mr Auzebi observes, is supported by the inspection of the teeth of a large animal, such as a calf newly killed; and by the calcination of the teeth, which discovers neither the small cells nor porosities observable in other bones formed originally from simple membranes.

In the third chapter, the author treats of the cutting of the teeth, and of the means to be used for the prevention of those accidents which sometimes attend it. His remarks on this subject are chiefly confined to the frictions that are used either by the finger, or any other means, with a view to promote the cutting of the teeth. These practices he condemns, as hurtful, from the callosity which they induce, by that means rendering the gum more difficult to be cut afterwards.

To

To remedy this, he advises, that whatever is used to rub the gums with be rough on the surface, because, from friction. with a substance of this nature, the gums are disposed to separate.

The fourth chapter contains an account of the shedding of the teeth; of their being replaced; and of the error that has been entertained, that the first teeth have roots. Here Mr Auzebi observes, that, as in early life the humours are less charged with saline and terrestrial particles, the teeth in children cannot be so strong as in adults. Hence the first teeth, destined to grind tender aliment only, become insufficient to bruise what is more hard and tough. Thus, they are shaken by the frequent shocks they receive, and when they are once loose, their falls becomes inevitable, because they cannot be moved without separating from the vesicular membrane which furnishes their nourishment; and because, when they are separated from this membrane, the lymph destined to form their roots, can no longer adapt itself to them, so as to constitute one solid body. By this means it overflows, and diffuses itself into the cavity which served as a mould to the first tooth, and becomes the rudiments of a new one, infinitely more strong and solid.

This new tooth, formed in the bottom of the socket, when it has acquired a certain bulk, necessarily pushes out the first tooth. The shedding of the teeth, Mr Auzebi observes is, besides this, much forwarded from the first teeth having no roots. This opinion he supports, in opposition to most dentists, upon the principles he has adopted of the formation of the teeth; that the base is first formed, and that the root is the last part of the tooth which is completed.

Mr Auzebi observes, that it is not always proper to pull a first tooth, when it has remained a considerable time after it ought to have been shed. When this happens, the probability is, that roots have been formed to it, in which case, there is little chance of a second succeeding it. And, even when it is thought necessary to pull a first tooth, it ought to be done with the greatest caution, lest the vesicular membrane be hurt, upon the safety of which our author thinks the growth of the second tooth entirely depends. When several of the first teeth, next to each other, have fallen at once, and the second teeth seem to be coming in a bad direction, he advises that the vacant spaces be filled up with pieces of ivory, shaped on purpose,

pose, by which means the teeth will be kept in a proper situation.

In the sixth chapter, the author gives an account of the methods used for replacing ill arranged teeth, by means of plates of metal, and of threads, applied differently, according to the disposition of the teeth. He next treats of caries in the teeth, the consequence of scurvy, and he gives a general view of scurvy, as affecting the whole system. He observes, that however the teeth may differ in structure, from the other bones, the caries which affects them is the same, in both arising from the stagnation of a fluid which ought to circulate. When a tooth is carious, he recommends that the whole of the affected part should be removed with an instrument, and that the opening should afterwards be stopt as closely as possible, with gold-leaf or lead.

IV.

Détail des Succès de l'Etablissement que la Ville de Paris a fait en faveur des Personnes noyées, avec les différentes Instructions qui y sont relatives, et la Maniere dont on doit faire Usage des Objets contenus dans la Boîte, ou se trouvent reunis les principaux secours qu'on doit administrer aux Noyés. On y a joint une notice chronologique des differents Ouvrages publiés sur cette matiere depuis 1700. Par. M. P. A. 12mo, Paris.

RRepeated experience has put it beyond all doubt, that many, supposed to be dead, from being immersed in water for a considerable time, may be recovered by the application of proper means. This has induced different states in Europe to adopt such plans as they judged best calculated for a purpose so valuable. And in the treatise now before us, we are presented with an account of the success which has attended the establishment in the city of Paris, a place where accidents from drowning frequently happen.

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A similar treatise is proposed to be published every year, that the advantages resulting from this establishment may be the more evident.

The histories with which we are here presented, are divided into three classes. The *first* contains an account of drowned persons recovered by the assistance given them; of the nature of the assistance which they received; of the time which they had been under water; of the time which was employed in their recovery; and, *lastly*, of all the different means of cure which were used. In the *second* class, an account is given of the time of the submerision of those who, after being taken out of the water, had the means of cure employed without success. And, in the *third*, are enumerated those cases on which no trials were made, because they evidently appeared unnecessary.

In the first class, we are presented with twenty-three cases. One recovered after being three quarters of an hour under water, four after half an hour, and three after a quarter of an hour. All the rest were taken out immediately upon falling in; yet, in every case, the patient was deprived of sense and motion.

In

In the second class, five cases are given, where the remedies, though tried, had no effect. One of these patients had been under water for an hour and a half, two for an hour, and one for three quarters of an hour. In this case, the remedies had so much effect that the patient received extreme unction. The time for which the fifth patient had been under water was unknown.

In the third class we have two cases only. Each of these patients had been in the water for twelve hours. From the flexibility of their joints, the author imagines, that, had remedies been properly applied, it is not impossible they might have been recovered.

After some account of the remedies used by others, the author next mentions those which are ordered to be employed in the city of Paris. These are as follows :

1. The wet cloaths are to be taken off as soon as possible ; the patient must then be well rubbed with warm flannel, and afterwards kept warm before the fire, or put into a warm bed, which, where it can be had, is preferable.

2. Air

2. Air must be blown through a pipe into the mouth, taking care that the nostrils be at the same time shut.

3. Injections of tobacco smoke must be thrown up the anus, by a machine fitted for that purpose.

4. The nose and throat must be irritated with a feather, snuff, or a little sternutatory powder; and volatile alkali must be held to the nose.

5. The whole surface of the body must be well rubbed with flannel, dipped in camphorated spirit of wine; and, if it be imagined that the patient can swallow, he must be made to take one or two spoonfuls of the same liquor.

6. All these means of cure must be continued for a long time: Perseverance is absolutely necessary; and it is often only after two or three hours of uninterrupted labour that the first signs of life appear.

The administration of these remedies, in the city of Paris, is intrusted to the guard soldiers, who have printed copies of the above directions, and have the medicines and necessary instruments in a box, by which means they can be easily transported

ported, should an accident happen at any distance. A premium is given to the first person who gives information that any one has fallen into the water, and likewise to the soldiers administering the remedies, who have besides every other expence defrayed.

This treatise is concluded with a chronological account of all the different books and essays that have been written upon the subject of recovering drowned persons.

V.

Experiments and Observations on the Mineral Waters of Philadelphia, Abington, and Bristol, in the Province of Pennsylvania. Read June 18. 1773, before the American Philosophical Society held at Philadelphia, by Benjamin Rush, M. D. Professor of Chemistry in the College of Philadelphia. 8vo, Philadelphia.

IN the treatise now before us, Dr Rush proposes, first, to give the chemical history of the waters of Philadelphia, Abington, and Bristol in America; then to mention some of the diseases

eases in which they are useful ; and, lastly, to subjoin some directions, with regard to their use.

The water of the Philadelphia spring, fresh from the pump, has a slight fetid smell, is somewhat turbid, and after being exposed for a few hours to the air, it deposits a yellow sediment. Its smell is increased by rest ; it has a strong ferruginous taste ; and its specific gravity is to that of rain-water, as 1000.45 to 1000. The Abington water has a ferruginous taste, and, by exposure to the air, becomes turbid, depositing a yellow sediment. Its specific gravity is to that of rain-water, as 1000.90 to 1000. The Bristol water is transparent, but deposits a yellow sediment upon standing a few hours in the open air ; it has a ferruginous taste ; and its specific gravity is precisely the same with that of rain-water. All these waters are emetic, purgative, or diuretic, according to the constitution of the patient with whom they are employed, or the quantity taken into the stomach. They likewise quicken the pulse and promote perspiration.

The result of twenty-one experiments made upon these waters in the way of mixture, gives the following conclusions. They contain no alkaline salt : They are free from any large quantity

tity of saline or calcareous matter : They contain no acid in a simple state : They all contain iron, which Dr. Rush imagines is dissolved in them, without the assistance of an acid, an alkali, or fixed air ; hence he concludes, that iron is in some degree soluble in simple water. The quantity of iron, he observes, which is found in these and all other chalybeate waters, varies according to the season of the year, the time in which they are drawn from the spring, and the degree of calcination the iron has undergone.

One quart of Philadelphia water yielded, upon evaporation, three grains of an iron ochre, and one of an earthy salt, which seemed to be composed of vitriolic acid and magnesia alba. Three quarts of Abington water, upon evaporation, gave half a grain of common salt and six grains of iron. One quart of Bristol water yielded, by evaporation, one grain of iron, and one of common salt.

In the second chapter, the author proceeds to mention the diseases in which these waters are useful. He recommends them in hysteria ; in palsy, where the pulse is not full, and where the symptoms of plethora are wanting ; in the gout, when it comes on in the decline of life ; in old diarrhoeas

diarrhoeas, unattended with gripes or a discharge of blood ; in want of appetite, owing to a defect in the stomach ; in cholics arising from mere weakness of the bowels ; in obstructions of the liver and spleen, whether arising from indolence, intemperance, or intermitting fevers ; in dropfy, but there they must be employed in larger quantities than in other diseases, and continued only while they operate by urine and stool ; in chronic rheumatisms ; in the piles ; in female obstructions and weaknesses ; against worms ; in cutaneous diseases ; in ulcers, whether scorbutic or scrophulous ; in diseases of the kidneys and bladder ; and in obstinate gleets.

The author cautions against their use in hypochondriasis, in most cases of haemorrhagy, in acute rheumatism, in gout during the prime of life, and in all diseases where an inflammatory diathesis prevails.

In the third chapter, which concludes this work, Dr Rush gives his opinion concerning the method in which these waters are to be used. He advises, that they should be drunk at the fountain head in the morning, at noon, and in the evening, to the quantity of a gill or half a pint

at first, by people of delicate constitutions, gradually increasing the doze, to the quantity of five or six half pints in a day, and using always some gentle exercise, immediately after drinking them. If the stomach cannot bear them by themselves, cinnamon or mint water ought to be added to them; and if they do not keep the belly gently open, laxatives must be employed for that purpose. They may be drunk for several months, in any season of the year, especially in spring, autumn, and summer. During their use, the patient ought to be very strict with regard to the quantity of his diet.

This treatise is concluded with a view of the comparative efficacy of these waters. Dr Rush prefers those of Bristol and Abington, on account of the free air and exercise which can be enjoyed at the same time that the waters are drunk.

VI.

An Extract of a Letter from Dr Nooth to Dr Franklin, F. R. S. on some Improvements on the Electrical Machine. Vid. Philosophical Transactions, Vol. 63. Part. 2. 4to, London.

THE author of this paper introduces his observations, by remarking, that, while considerable improvements have been made in the science of electricity in general, the electrical machine has hitherto remained in an imperfect state.

To discover the cause of the uncertainty in the action of electrical machines, Dr Nooth's attention was first directed to the appearances produced by a machine in motion, and to the effects which the glass and rubber had on each other. He conjectured that part only of the electrical fluid, excited by the friction, was carried to the glass in motion. This supposition suggested an experiment, the event of which sufficiently proved that the greatest part of the excited fluid was, in general, reabsorbed by the fore part of the cushion,

without becoming sensible on the superior part of the glass. This fact being ascertained, he next attempted to discover some method of preventing the return of the electrical fluid, till it made a revolution upon the globe. After many trials, he found that this might be effected by the interposition of silk, rubbed over with bees wax, between the fore part of the cushion and the globe. When the silk was ten or twelve times doubled, all communication between the glass and the cushion seemed to be prevented, and the power of the machine was greatly increased.

Having remedied a defect in the anterior part of the cushion, attention was next paid to the posterior part of it. As this is the part alone concerned in excitation, the object was to render the afflux of electric matter as great as possible, by the application of the most perfect electrics. This end was obtained by confining the amalgam to that part where the glass first comes in contact with the rubber; and then making a communication, by tin-foil, between the amalgam and the metallic plate, below the cushion; or, what answered better than the tin-foil, by fixing a piece of leather, covered with amalgam, to the posterior part of the rubber, in such a manner as to
allow

allow about an inch of it to pass under the cylinder. By either of these means, the electric matter found an easy access, and the power of the machine was incredibly augmented.

From these experiments, the author observes, that it should be an invariable rule, in the construction of all electrical machines, to place non-conducting substances at the fore part of the cushion, and conducting substances at the posterior part of it. With this intention, variously constructed rubbers may be employed; but the most powerful excitants which Dr Nooth has tried, were made of ten or twelve doubles of silk, stuffed with hair. The support of the cushion also, our author observes, should have its conducting and non-conducting side. For this purpose, he advises, that it should be made of baked wood, having the posterior part of it covered with tin-foil.

Dr Nooth concludes this paper with some observations respecting the disposition of the amalgam. To make it adhere to the posterior part of the rubber, he recommends that it should be mixed with pomatum, and that a little hair-powder should be strewed on during the revolutions of

the glass. By attention to these principles, he affirms that the electrician has nothing to fear from the humidity of the atmosphere, and that the machine will work equally well in all kinds of weather.

VII.

Account of a new Hygrometer, by M. J. A. De Luc, Citizen of Geneva, F. R. S. and correspondent Member of the Academies of Paris and Montpellier. Vid. Philosophical Transactions, Vol. 63. Part 2. 4to, London.

THE plan which Mr De Luc proposes to follow in this paper is, to relate the means by which he attempted to improve the hygrometer, and the obstacles he met with; the means by which he endeavoured to overcome these difficulties; the degree of perfection at which he has arrived; the hopes he has of farther improvement; and the uses which may be derived from his first experiments.

According to our author, the essential requisites of a hygrometer are, 1st, The settling a fixed point, from which every measure of the same kind should be taken, analogous to that of boiling

boiling water with the thermometer, when the barometer is at a certain height. 2. The ascertaining degrees equally determined, or comparable in different hygrometers, as in the thermometer. 3. Constancy in the variations produced by the same degrees of humidity. An instrument, with these conditions, he supposes, will enable observers to understand one another, when speaking of different degrees of humidity.

In attempting to ascertain the first point, he considers the hygrometer itself, and the phaenomena humidity operates. He endeavoured to find a fixed point in the extremes of dryness and moisture, and in the intermediate degrees. His attempts to establish it in the extreme of dryness and the intermediate degrees were fruitless. At last, after much reflection, water occurred to him as the extreme of humidity, or what he afterwards expresses by the term humor. The state, in which the water was used, was that of melting ice. This principle being established, his attention was next directed to the hygrometer itself. He first endeavoured to discover a substance that was affected by humor, without being altered by it. He found that ivory, in a particular manner, possessed this quality. The next object of attention was, to discover

cover the form best fitted to be acted upon by humidity. After repeated trials, he found, that a hollow cylinder, the variations in the capacity of which, when more or less moist, he could measure with quick-silver, was best adapted for the purpose. To this ivory tube, he fitted a glass one, the rising or falling of the mercury in which, shewed that the ivory tube was more or less deprived of moisture.

The next difficulty was to find out a way of estimating the changes of capacity in the ivory tube, by means of the variations of the height of the mercury in the glass one. This he perceived might be effected by applying to his hygrometer a thermometrical tube already graduated, by means of two fixed points. It would then be necessary only to know the proportion of the weights of mercury in this thermometer, and the hygrometer to which it was applied, that degrees in this last instrument might be as well determined as in the first.

Every principle being thus settled, it now only remained to invent the construction of the instrument. Of this we have next a particular account, together with a plate and explanation of it. He then relates his first observations made with this
hygro-

hygrometer, and his experiments, with a view of discovering the accuracy of the instrument. From this, it appears, that the difference of four hygrometers, exposed in places where humidity may be supposed to have had equal access to them, was usually from 19 to 21. And the different instruments did not always preserve the same proportion to each other.

The author next presents us with some considerations on the degree of accuracy which this instrument has obtained. Though its defects evidently appear, yet he observes that they are not more considerable than those of the barometer and thermometer, when these instruments first came out of the hands of their inventors; and as their defects are now surmounted, we should not despair of remedying those of the hygrometer.

The author next points out his views for the improvement of this instrument. These are as follows: 1. The ivory pipes should always be exactly of the same thickness, and turned upon brass cylinders. 2. The texture of the ivory should be the same, in the whole circumference of the pipe; and, as there is often a difference in the organization of different parts of the same tooth, an homogenous part should be chosen, that which is most so
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being in general between the center and the surface, at some distance from the apex. 3. The ivory pipe should be perforated exactly in the direction of its fibres. 4. Attempts should be made to make the degrees of the hygrometer correspond with equal degrees of moisture ; for this purpose, some substance, very greedy of moisture, should be placed in very exact scales near the hygrometer, and its augmentation or diminution of weight compared with the variations in the instrument. 5. To determine the preparation which ivory pipes must undergo, in order to acquire a lasting degree of consistence, old hygrometers should be compared with new ones, to know if they have undergone any alteration, and in what degree. 6. In fixing the extreme of humidity, care should be taken that the ice be free from dust. Lastly, inquiry should be made, whether there be not a difference between the effects of heat upon the ivory of the hygrometers and upon the glass of the thermometer, sensible enough to be attended to in correcting the effects of this cause upon the hygrometer.

After this, Mr De Luc gives a detail of some observations made with his hygrometer. One of these, he thinks, throws some light on the phenomena

nomena of dew. When the sky is cloudy, there is little or no dew, and the air is not so much cooled immediately after sun-set. This phaenomenon, the author accounts for in the following manner. When there are no clouds in the air, the heat of the inferior air, and that which rises from the earth, dissipates itself into the superior regions, and then the vapours which are dispersed throughout the air, condense and fall down in dew: But when the clouds continue, they separate the inferior from the superior air; and thus prevent the dissipation of the heat, by which means the vapours remain suspended. When the sky grows cloudy, some hours after sun-set, although the heat has been sensibly diminished, it is again increased; because, continuing to rise out of the earth, it is accumulated in the inferior air. Mr De Luc here takes it for granted, that the most common and plentiful dew proceeds from the air, and not, as some have supposed, from the earth.

Another observation, which, as being connected with medicine, the author thinks it worth while to mention is, that, from the result of his trials with the hygrometer, in warm water, it appears, that, when an equal quantity acts, the warmer

mer the water is, the more it separates the particles of those bodies which it pervades.

VIII.

Of the Electric Property of the Torpedo, in a Letter from John Walsh, Esq; F. R. S. to Benjamin Franklin, Esq; L. L. D. F. R. S. and Ac. R. Par. Soc. Ext. &c. Vid. Philosophical Transactions, Vol. 63. Part 2. 4to, London.

THE information which this paper contains concerning the torpedo was sent by the author in two letters to Dr Franklin. In the first letter, which was written from Rochelle, and dated the 12th of July 1772, Mr Walsh observes, that the torpedo is electrical, and that its electricity is conducted and interrupted by the same bodies as artificial electricity: That the back and breast are in different states, so that a shock took place on a communication being established between them; but no effect was produced when they were touched with wax or glass. The numbing sensation, which this animal occasions, can be exactly

exactly imitated by a charged phial. No spark has ever been observed to accompany the shock from the torpedo; and of at least 200 shocks, not above one extended higher than the elbow. This animal can give forty or fifty successive shocks when insulated, and these with little or no diminution in their force. The experiments which shewed these phaenomena were made chiefly in the open air.

In the second letter, which is dated at Paris the 27th of August 1772, Mr Walsh informs that he spent a week at the Isle of Ré in making experiments on this animal. He found that the vigour of the fresh taken torpedo was not able to force the electrical fluid through the smallest tract of air; not even through an almost invisible separation made by the edge of a pen-knife in a slip of tin-foil pasted on sealing wax; and the spark could not be discovered even in darkness.

The effect produced by the torpedo, when in air, appeared, on many repeated experiments, to be about four times as strong as when in water. During Mr Walsh's stay at Rochelle, he made some public exhibitions of his experiments. A narrative of what passed was inserted in the French gazette, and

and he now avails himself of this testimony to the facts he has advanced, by giving a translation of that narrative.

Before our author left the seas which abound with this singular animal, he resolved still farther to examine its electric powers, when acting in water. A large torpedo, very liberal of its shocks, being held with both hands, by his electric organs above and below, was briskly plunged into water, to the depth of a foot, and instantly raised an equal height into the air. He was thus continually plunged and raised for the space of a minute. At the instant his lower surface touched the water, in his descent, he always gave a violent shock; and another still more violent at the instant of quitting the water, in his ascent. Both these shocks, particularly the last, were accompanied with a writhing in his body, as if he meant to force an escape. Exclusive of these two shocks on the surface of the water, which may yet be considered as delivered in the air, he constantly gave, at least two, when wholly in the air, and constantly one, sometimes two, when wholly in the water. The shocks in the water, however, were much weaker than those in the air.

A torpedo in water being touched on his electric organs with one hand, while the other hand was at some distance in the water, communicated a shock to both at the same time. From this, and other experiments, the author concludes, that bodies immersed in water may be affected by immediate contact with the torpedo; that the shorter the circuit in which the electric fluid has to move, the greater will be the effect; and that by the intervention of some substances, the shock may be communicated from the animal in water to persons in air.

Mr Walsh observes, that the power of this animal in exciting electricity, resides in what he calls its electric organs alone; the rest of its body being no otherwise concerned in this effect than as conducting electricity. These parts seem to be in such a manner subject to the will of the animal, that their upper and under surfaces, when in a state of equilibrium with respect to electricity, are capable, from its mere energy, of being thrown instantly into an opposition of plus and minus, analogous to the condition of the charged phial. When the electric organs of the torpedo are thus charged, the upper surfaces of the two are in one state of electricity, and the under surfaces

faces in an opposite state. In proof of this, Mr Walsh observes, that no shock can be obtained by an insulated person, touching both organs above or both below, and that the production of the effect depends solely on an intercourse being made between the opposite surfaces of the organs, whether taken singly or together.

From all that has been said, the author concludes, that the effect of the torpedo evidently proceeds from a particular modification of the electric fluid; and he finishes this paper with answering some objections that may be brought against the supposition. These are, that the charged phial occasions attractive or repulsive dispositions in other bodies; that its discharge is obtained through a portion of air; and that it is accompanied with light and sound; nothing of which occurs with respect to the torpedo. These difficulties he solves, by shewing, that the same quantity of electric matter, according as it is used in a dense or rare state, will produce different consequences.

To this ingenious paper by Mr Walsh, are subjoined some anatomical observations on the torpedo, by Mr John Hunter. At the desire of
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Mr Walfh, Mr Hunter undertook to dissect and examine the peculiar organs, by which the torpedo produces its electrical effects.

The torpedo is of the family of the Rays, nor does it differ materially from the others in its general structure and anatomy, excepting in its electric organs. These are situated on each side of the cranium and gills, reaching from thence to the semicircular cartilage of each great fin, and extending longitudinally, from the anterior extremity of the animal, to the transverse cartilage which divides the thorax from the abdomen. They consist wholly of perpendicular columns of different shapes, reaching from the upper to the under surface of the body, and varying in their lengths according to the thickness of the part of the body where they are placed. They are plentifully supplied with blood vessels and nerves, particularly the latter; in so much that Mr Hunter observes, the magnitude and number of nerves bestowed on these organs, in proportion to their size, will, on reflection, appear as extraordinary as the phaenomena they afford. But how far it may lead to an explanation of their operation, time and future discoveries alone can fully determine.

IX.

*Pharmacopœia Collegii Regii Medicorum Edin-
burgensis, 8vo, Edinburgi.*

THE college of physicians of Edinburgh first published their dispensatory in the year 1699; they afterwards gave new editions of it in 1722, 1735, 1744, 1756; and it is now presented to the public for the sixth time. At each publication many alterations were made; but at no time have more considerable changes taken place than at present. In giving an account of this work, it might, perhaps, be expected, that we should point out the many changes that appear in it; but, as we presume that the book, from its general utility, will be in the hands of most of our readers, we judge it less necessary to enter into any full detail.

The catalogue of the materia medica is much abridged, as those substances only are inserted which are employed in the present practice; and as those substances are omitted, which are almost always to be found in every family. In other respects,

spects, however, the same catalogue is a little augmented, as several new medicines are introduced, and as several medicines, which formerly stood among the prepared and compounded, are now brought into the list of the materia medica, because they are such as cannot be conveniently prepared by the apothecary himself, and are more easily procured from others, who make a trade of such articles.

The changes in the materia medica are still less considerable than those made in the prepared and compounded medicines. This part of the work is much abridged, by the omission of almost all those medicines which cannot be long kept in their prepared state, and are to be prepared only when occasion for their use immediately requires. They are thus properly left to be varied at the discretion of the prescriber. Besides these, many others are omitted, as they have come to be neglected in the present practice, and are therefore to be supposed less proper, efficacious, or elegant. Examples of this may be observed in the articles of simple and spirituous waters, vinegars, conserves, powders, and several others. The melita are entirely omitted, as it would seem that, in the composition of medicines, the college think honey

has no advantage over sugar, and that its condition is, at the same time, much more uncertain.

In most of the articles retained, the college have made considerable changes in reducing them to greater simplicity, in adjusting the proportions more exactly, or in giving them a more elegant form. Their study of simplicity appears remarkable in the electuarium thebaicum, which they have given as a substitute, not only for the theriaca of the last edition, but also, as we suppose, for the theriaca, mithridate, philonium, and several other luxuriant compositions of the antients.

A few other of the considerable changes may be here pointed out. The *Tinctura martis* is directed to be prepared, not as formerly, from the filings, but from the squamae, or those flakes which fall off in the hammering of hot iron. The advantage of this is, that the tincture does not then let fall the iron, as the others always did; whence it continues to be more uniformly of the same strength.

The *Elixir proprietatis vitriolicum* and *Elixir vitrioli dulce* are now in their quality more exactly ascertained, by the state of the Spiritus vitrioli dulcis being more exactly fixed.

The

The *Tinctura sennae composita* is rendered more simple; and, as we judge, more agreeable and efficacious, by jalap's being employed in place of rhubarb.

In preparing the extracts of jalap and Peruvian bark, the solutions, instead of being made, as formerly, both by infusion in spirit and decoction in water, are now prepared by means of a spirituous menstruum only.

The *Aqua raphani composita*, instead being distilled in the common still, is now ordered to be made by distilling spirit of wine from the horseradish root, in the heat of boiling water; and adding afterwards to the distilled spirit an aromatic water.

The oil of amber is now ordered to be rectified by distillation, repeated four times, and every time in a clean retort, leaving behind about an eighth part of the oil which was put in.

The *Acidum nitri vinosum*, or, as it was formerly named, the spiritus nitri dulcis, is now ordered in such a manner, as to render the preparation more easy, and the medicine more perfect.

The same is to be observed with respect to the *Liquor aethereus vitriolicus*.

The *Spiritus salis ammoniaci vinosus*, and *Spiritus volatilis aromaticus* are made by simple mixture, in place of the distillation commonly employed.

Instead of ordering the calcination of plants, for obtaining a fixed alkali, the college have now, under the title of *Sal lixivius purificatus*, given directions for obtaining a very pure alkali from the alkaline salts, prepared for the purposes of bleaching and other arts.

The *Tartarum solubile* and *regeneratum*, in following the London college, are more properly directed than they were before.

The *Mercurius corrosivus ruber*, or, as it is commonly called, the red precipitate, is directed, so as the flaky appearance, peculiar to that preparation, may be produced by a proper management of the calcination, and that without any other menstruum having been employed in the solution than the nitrous acid.

The *Tartarum emeticum* is directed with greater exactness, for obtaining both a more effectual and a more uniform preparation.

In the composition of the several syrups, the sugar is ordered by troy or medical weights, and
the

the proportion of it is, therefore, more exactly adjusted.

In the ointments and plasters, nothing is more remarkable than the omission of turpentine, which had formerly been so universally employed. In doing this the college seem to avoid sometimes the acrimony, and sometimes the uncertainty of consistence which the turpentine might occasion.

The college have not only made these, and many other changes in this edition, but have also introduced many new medicines. Among these are all the medicines which have of late been recommended by Professor Storck of Vienna; besides which, the following may be taken notice of: *Oleum expressum e semine ricini*. This stands in the catalogue of the materia medica, as supposed to be imported from abroad; but the college have found, that, when the seeds can be had in good condition, the oil expressed from them here is more to be depended upon, than that imported from abroad. *Tinctura absinthii* is directed to be made by a double infusion, a method which might probably be employed for other tinctures with advantage. *Extractum seminum cicutae* is alledged to be less uncertain in its preparation than the extract from the leaves.

Calx antimonii nitrata is, we believe, intended to answer the purposes of James's powder.

Pulvis e jalapa compositus is ordered, because the triture of the jalap renders its operation more gentle, and also more powerful.

The following also, viz. *Tinctura e kino*, *Tinctura meconii*, *Tinctura moschi*, *Lixivium causticum*, *Magnesia usta*, *Cuprum ammoniacum*, *Calx five flores zinci*, *Pulvis sudorificus five Doveri*, *Pilulae coeruleae*, *Pilulae Plummeri*, *Trochisci bechici cum opio*, may all be considered as new medicines; but they hardly require our remarks.

Upon the whole, we believe that the choice, simplicity, accuracy, and skill which appear in this work will render it very agreeable to the public,

S E C T.

S E C T. II.

Medical Observations.

I.

The History of an uncommon Swelling of the Arm, which, after threatening a general Gangrene, terminated favourably. By Mr John Aikin, Surgeon at Warrington.

A Young man, aged about eighteen, tall and lusty, was seized, in spring 1772, with a kind of slow fever, which, after continuing three or four weeks, left him spontaneously. He thought himself well enough to go to work, and had appointed a person to call him early on Monday morning; when on the Sunday night he was attacked with violent rigor, succeeded by acute pain, in the left arm. In the morning it was much swelled

swelled and discoloured. The pain continued, and the swelling and discoloration increased; when on the next day I was sent for.

I found his hand and fore arm greatly swelled, and, for a considerable space, stained with a purplish red, in some places heightened almost to black. The tip of the right ear was affected in the same manner. In other respects he seemed perfectly well. His pulse was tolerably strong, and not at all accelerated; and his appetite continued pretty good. I immediately put him upon a course of Peruvian bark, joined with an aromatic; got him plentifully supplied with red port wine; and ordered a spirituous fomentation to the affected parts. The disease, however, for a while continued its progress. The red stains turned to black, and overspread the whole hand and arm; and gangrenous vesications appeared on the surface. The other arm began to be affected; and spots appeared upon his cheeks and breast. The pain was still so acute as to prevent his sleeping. In other respects, however, he continued surprizingly well.

I persisted steadily in the treatment mentioned above; and, in another day, the disease seemed to be at a stand. I now looked for a separation
of

of the morbid from the sound parts ; since their appearance was such, that I could not conceive of any better termination. But I was here agreeably disappointed. The skin gradually recovered its native colour, exactly in the same manner as it had lost it. The deep purplish black changed to crimson. This became lighter and lighter, till at length these most formidable appearances, which seemed to threaten a general mortification, were entirely confined to the left hand. Here the disease made its last stand ; and the skin broke about the roots of the fingers, which still remained black and much swelled. The separation of the morbid parts was tedious, but was at last effected, with no other loss than that of the last phalanx of two fingers ; the use of the rest and of the hand remaining entire.

The patient's general health continued perfectly good ; and he is now strong and hearty. It is to be observed, that he was of the lowest class of our working people, whose diet is generally very low and poor ; consisting very much of potatoes and butter-milk. There was a scrophulous taint in the family ; but I could not find that he had ever been affected with it.

II.

A Case of Melancholia cured, by Dr William Grant, Physician in London.

MR C-----d was formerly a grocer in this city, and by great industry and attention acquired a competent fortune by the age of fifty, with which he retired into the country. There he proposed to live in ease and affluence. But he did not consider that a mind accustomed to exertions does not agree with idleness. Like stagnant water, it corrupts, and one must abate his diet in the same proportion he does his bodily labour.

He soon became bloated and big bellied; and found himself melancholy without cause; and, at last, when almost tired of life, he consulted a physician, who ordered issues, blisters, bark, steel, cold bathing, and many other medicines, without effect. At last he became delirious without fever; and never went to sleep, from an imagination that the devil was continually tempting him to hang himself.

Upon

Upon examination, I found his tongue foul ; his pulse full, soft, and beating only 50 strokes in a minute ; his belly was big, hard, and costive ; his countenance was dejected ; his eyes prominent and yellow ; his colour fallow ; and he was sulky, and very obstinate. He was averse to taking any drug, because, said he, my body is very well, and drugs cannot hunt the devil from me, who now duns in my ear, “ C-----d, hang yourself at once, “ and get out of misery.”

In this situation he was put upon a diet of fruit, vegetables, and Rennet whey ; and he took every morning, *Man. opt. ʒii. Tart. solub. ʒss.* in a pint of common emulsion. After three days a scruple of jalap was added, because the emulsion was found insufficient to keep his belly open. At the end of the third week, his pulse got up to 78 ; and he began to purge. He was then put into a tepid bath for an hour every night ; and the emulsion was continued, without the jalap. At the end of the sixth week, his eyes were clear, his tongue pretty clean, and his belly soft, though still bulky. He had also some sleep ; his pulse was 80 ; and the devil was absent for many hours in the day time.

I now propos'd to him to continue his diet and emulsion, and to go into the cold bath every morning; upon which he flew into such a rage, that I soon perceived I had made less progress than I imagined: And accordingly, I had him removed from his brother's house, to a proper house, where the discipline soon made him calm and tractable. There he went on with the diet, cold bathing, and emulsion, till he was free from the devil. Upon this, the manna was gradually taken out of the emulsion, and the soluble tartar alone kept his belly regular; although sometimes he found it necessary to take one of the *Pil. ruf.* at night, to assist the emulsion. At the end of the third month, he was allowed broth and boiled meat for dinner; and continued to mend slowly to the end of the fifth month, when he was removed to his own house in the country, contrary to my advice. They write me, however, that there he takes his soluble tartar, and either works in his own garden, or rides on horseback every day; and is, upon the whole, pretty well. Had he remained here six or eight months longer, I think I would have answered for his cure.

III.

III.

The History of a Case, in which a Quantity of Pus from an Abscess, near the Rectum, making its way into the Scrotum, gave the Appearance of a Hernia, by Mr Thomas Anderson, Surgeon in Leith, a Member of the College of Surgeons in Edinburgh.

A Man about fifty years of age, of a middle stature, very muscular, and rather corpulent, about the beginning of March 1770, was attacked with a cough, to which he paid little attention for two weeks: But, at the end of that time, he became affected with a severe pain in his side. He was then three times bled, and enjoined to use a low diet. By the first of April, the pain in his side was much abated: But the cough was rather increased: and he complained of a pain in the anus, which, upon coughing, was very severe.

This pain continued increasing till the fourth. It was then almost intolerable upon coughing, and very uneasy when he was in an erect posture. His pulse, which hitherto had always been under

a hundred in the minute, now rose to 120. In this situation, he was blooded, had an emollient injection, and a gentle laxative by the mouth.

On the 5th, 6th, and 7th, the pain in the anus continued. He was blooded each of these days; and at each bleeding lost about 16 ounces of blood. His belly was at the same time kept open by laxatives; and emollient injections were thrown up twice a day.

On the morning of the eighth, he complained of a hardness at the anus, which extended from thence about half way to the scrotum, on the left side of the seam in perinaeo, and felt to be about the thickness of a finger. The skin was not discoloured; but upon its being touched, a most exquisite pain was excited. He was again blooded, an injection thrown up, and an emollient poultice applied to the part. His complaints, however, were not mitigated; and about five in the evening he was seized with a fit of general convulsions, upon coming out of which, he complained of his scrotum being much swelled. When it was examined, the left side was found greatly distended, from the rings of the muscle to the bottom of the scrotum. This tumour was of an uneven appearance; but he complained of so much

much pain from the smallest pressure, that it was difficult to examine it. From its appearance, however, and from its taking place almost instantaneously, it was concluded to be a portion of the abdominal viscera. But no reduction could be attempted. He now found himself much relieved from the pain of which he had before complained, and his scrotum was only uneasy, if it was pressed or not suspended. At this time he got a laxative, which procured him three stools before next morning.

On the morning of the 10th his pulse was 110, and small; the heat of his body was natural; and he found himself easy, except upon motion, or any pressure to the scrotum, which still gave exquisite pain. About five in the evening, he was much oppressed; his pulse was 120, and smaller than before; he was now and then affected with hiccough; and in the middle of the tumour the skin was dry, and gave a crackling noise, upon pressure. In this situation he was visited by Dr. Gregory, Mr W. Gibson, Mr Thomas Wood, and Mr J. Gibson who were all of opinion that the only chance for recovery was, from the operation, for the bubonocoele, being immediately performed. It was at the same time much doubt-

ed, whether it was not even already too late. As he would not, however, then submit to it, warm applications were put to his feet; and warm port-wine given him frequently.

Next morning about 10 o'clock his pulse was 120, but fuller; the singultus was gone; he had got some sleep during the night, and found himself easier. But the tumour was still as painful as ever upon pressure; the dryness of the skin in the middle of it was larger, and the crackling, upon pressure, more distinct. The operation was now resolved upon.

When the incision was carried through that part of the skin which crackled upon pressure, a quantity of air was discharged, which seemed to have been contained between the skin and the vaginal coat. Immediately upon opening the vaginal coat, there flowed out a quantity of thick well digested pus; and, upon the opening being enlarged, upwards of sixteen ounces of it were discharged. It was now found, that no part of the viscera had passed the ring of the muscles, and that the tumour was entirely owing to this collection of pus in the tunica vaginalis. After this he was perfectly free from pain at the anus; his

his other fymptoms gradually difappeared; and the wound was cicatrized in five weeks.

IV.

An Account of the Paracentesis being performed in the Thorax, for the Cure of an Emphyfema. By Mr George Kellie, Surgeon in Leith.

A Man about 57 years of age, who had for feveral years laboured under a cough, attended with difficulty of breathing, on the morning of the 1st of April 1769, was fuddenly awakened with a fevere fit of coughing, violent pain in his fide, and great difficulty in breathing. The pain was fixed to one place, between the 7th and 8th ribs. It was much increafed by his cough, which, at the fame time, became more frequent. A furgeon in the neighbourhood was immediately fent for, who blooded him, and gave him a pectoral decoction. As he was not relieved, the bleeding was repeated in the forenoon, and a blifter applied to the place in which he complained of the fixed pain. In the evening of that day,

I was desired to visit him, when I found him affected with the symptoms mentioned above. His pulse beat between seventy and eighty strokes in a minute; and the blood which had been last taken from him was not in the least fizy. I ordered him a solution of Gum. Ammoniac, and a purging clyster, as he had been costive for some days.

On the second, he still continued as before, nothing relieved by the bleeding, blistering, or glyster. His pulse was soft and not quicker than natural. In the night he accidentally observed his scrotum much swelled, but without pain. Next morning, upon a careful examination, the whole right side was found covered with an emphysematous swelling, which yielded to the touch, but kept no impression. Wherever it was pressed, it gave a crackling noise.

When I saw him on the fourth, the swelling had increased over his whole body. It extended also to his arms, hands, and neck, as high as the angle of the lower jaw. I directed that his whole body should be rubbed with flannel cloths and camphorated oil; and, as he was still costive, I ordered him a bolus of jallap and calomel.

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On the 5th, the bolus operated well, but the swelling still continued, and was attended with great oppression in his breathing. The scrotum appeared to be more flaccid, but the penis itself was much enlarged. Upon mentioning this case to Dr Monro, his advice was, that the side should be accurately examined with a view of discovering at what part the air got into the cellular membrane. If the place could be discovered, he proposed, that an incision should there be made thro' the skin; and if that afforded no relief, or did not evacuate the air, that a perforation should be made into the thorax by means of a trocar.

His side was carefully examined on the 6th; but it was impossible to discover from what part the air got into the cellular membrane. The pain of which he complained had shifted lower down, and farther back than it was at first. As his difficulty of breathing, however, was much increased, Dr Monro proposed that an incision should be made at the part where he was first affected with the pain. This was accordingly done, about the middle of the thorax, between the 7th and 8th ribs. His breathing, however, was not in any degree relieved, nor was any air discharged, unless upon rubbing towards the opening. A

perforation was therefore made into the thorax, obliquely, between the ribs. Upon withdrawing the perforator, such a blast of air issued through the canula, as to blow out a lighted candle, three or four times. Immediately upon this, from being before in the most miserable situation, he became easy, and almost totally free from his oppression. His pulse, which, before the operation, beat above an hundred strokes in the minute, soon fell to ninety. A cork was put into the canula, which was left in the opening, and tied with a string round his body. On a violent fit of coughing, however, with which he was seized in the night, it came out ; but it was again introduced next morning.

As his difficulty of breathing was very considerable, after the first perforation, the canula was withdrawn altogether on the afternoon of the 7th. At that time several incisions were made into the cellular membrane, in different parts of his body. Through these the air puffed out, when a pressure was made towards them, but not otherwise.

From the 8th to the 14th, his breathing continued easy, and the swelling gradually abated. He was, however, greatly distressed with his cough,

cough, particularly when in a recumbent posture, which obliged him to sleep in a chair for some nights. On the 15th, the frequency of the cough excited such a pain in his side, as to render bleeding necessary. His blood appeared very fizy; and next day the pain in his side was much abated. He then got an infusion of fenna with tamarinds, by way of purgative, which operated well.

On the 17th he was much easier, although he durst not lie in bed during the night. He walked through the house; but complained, at times, of a pain in his side, at the place where the operation was performed. He imagined also, that there was sometimes a rising of the skin there in a lump: But this I could not perceive, although I held my hand upon it for a considerable time, and made him put himself in all the different positions which he thought occasioned the swelling. Next night he ventured to go to bed, and slept easily for some hours. From this time he continued to recover; and, by the 30th, excepting weakness, he was free from all complaints. His cough was even easier than before he was attacked on the 1st of April; and he eat and slept as

well as he had done, at any time, for thirty years before.

From this time, to the beginning of March 1770, he enjoyed a good state of health. But he was then attacked with cough, pain of his breast, and difficulty of breathing, to which a hectic fever soon supervened. Notwithstanding every thing that could be done for him, these symptoms, particularly the hectic fever, daily gained ground; and he died on the 16th of April.

I obtained permission to examine his body after death. Upon opening the thorax, I found the lungs in a very putrid diseased state, with some tubercles on the external surface of the right lobe. A great portion of them firmly adhered to that part of the pleura which lines the ribs; particularly at the place where the perforation had formerly been made into the cavity of the thorax. By making an incision into the right lobe, I discovered an abscess containing about four ounces of purulent matter, which emitted a very disagreeable smell. All the other viscera appeared to be in a sound state.

S E C T.

S E C T III.

Medical News.

IN pursuance of our plan of giving accounts of learned men, we shall here present our readers with some anecdotes of the late Dr Gilchrist, whose death we mentioned in our last number.

Dr Gilchrist was born at Dumfries, in Scotland, in the year 1707. He began the study of medicine at Edinburgh, which he afterwards prosecuted at London and Paris. He obtained the degree of Dr of medicine from the university of Rheims; and, in the year 1732, he returned to the place of his nativity, where he afterwards constantly resided, and continued the practice of medicine till his death,

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It may, with justice, be said, that few physicians of the present century have exercised their profession in a manner more respectable or successful than Dr Gilchrist ; and few have contributed more to the improvement of the healing art. Having been engaged in business at an early period of life, his attention was wholly devoted to observation. Endowed, by nature, with a judgment acute and solid, with a genius active and inventive, he soon distinguished himself by departing, in various important particulars, from established, but unsuccessful modes of practice. Several of the improvements which he introduced have procured him great and deserved reputation, both at home and abroad.

His practice, in ordinary cases, was allowed to be judicious, and placed him high in the confidence and esteem of the inhabitants in that part of the country where he lived. But his usefulness was not confined to his own neighbourhood. On many occasions he was consulted by letter, even from the most distant parts of the country.

In different collections are to be found several of his performances, which prove that he had something new and useful to offer upon every subject to which he applied himself. But those
writings

writings which have done him the greatest honour, are two long dissertations on nervous fevers, in the medical essays and observations, published by a society in Edinburgh, and a treatise on the use of sea voyages in medicine, which first appeared in the year 1757, and was afterwards reprinted, with large additions, in 1771.

If it should be remarked, that the essays on nervous fever abound too much with the theory of the schools, which prevailed at the time they were written: It may likewise be observed, that they contain many of the most prevailing opinions of the present times. But, whatever judgement may be formed of these particulars, it will be allowed on all hands, that, by means of the full and accurate relation which they contain, the attention of physicians was first turned to a species of fever which is now found universally to prevail in this country. It will further be granted, that the liberal use of wine, which Dr Gilchrist was the first among the moderns to recommend, has since been adopted in these fevers, by the most judicious physicians of the present age, and has probably contributed not a little to the success of their practice.

In his treatise on Sea-voyages, although we find him frequently acknowledging his obligations

tions to the antients, yet the work has in many respects been considered as an original one. It points out, in a manner so clear, and so much on the sure footing of experience, the utility of sea-voyages in various distempers, and particularly in consumptions, that there is now a prospect of our being able to employ a remedy in this intractable disease much more efficacious than any hitherto in use.

In the second edition of this work, the author relates his own farther experience and observation, which serves to confirm what he had before advanced. To these facts are subjoined the testimonies of several eminent physicians, in different parts of the world, to the efficacy of the remedy. In this edition also are contained many valuable practical observations on pulmonary disorders in general, and on the method of distinguishing them, in so much, that it may justly be esteemed one of the best accounts yet extant of these dangerous disorders, and of the success attending the different methods of treating them.

In an appendix to this work, we have an account of the success which the author experienced from warm bathing in fevers. This practice, which had not formerly been attended to, is there

there shown to be, in many cases, highly beneficial. Since that time, it has, in one shape or other, been much employed, with particular advantage.

Such is the short account we offer of Dr Gilchrist as a physician, and as an author. With regard to his character as a man, much, we believe, might be said: But, to enter upon this subject is what our readers in general would not expect, and what those who knew him would reckon unnecessary.

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Mr John Innes, who dissects for Dr Monro in Edinburgh, has favoured us with the following account of a man, whose organs of generation and urine were of a preternatural construction. This man, at the time of Mr Innes's examination, was thirty-one years of age. He was born of sound and healthy parents. He had, from his birth, immediately above the os pubis, a fungous excrescence, of a red colour, resembling granulation from a wound. This excrescence is about the bigness of a middle sized apple, and in each side of it there is an opening above the groin, through which a probe of six inches long, and of the size of a crow's quill, can be introduced. It must be of a curved shape; he adapts it himself to the passages

passages which seem to lead backwards and outwards. From the introduction of a probe in this manner, he complains of a slight pain about his loins. He observes that his pain is often in the side opposite to that at which the probe is introduced.

Through the two openings that have been mentioned, the urine flows constantly, unless there happen to be any accidental stoppage on either side. Such a stoppage creates great uneasiness, and he removes it by the introduction of a blunt probe ; the urine then flows as before.

He has an imperfect penis. As far as it can be seen, it has much the same appearance as if it had been cut through the middle longitudinally, with the sound side upwards. It has not the least vestige of any perforation or urethra. The crura penis terminating in the split corpora cavernosa can be distinctly felt ; and there is a very small swelling in the perinaeum, where the bulb of the urethra should be.

He has two small testicles below the rings of the external oblique muscles, with distinct vasa deferentia, which can be felt by the finger in the common manner. He has a scrotum which is empty

empty and contracted. He has not the least vestige of a navel; and very little beard, in proportion to his age.

Though the penis be imperfect, yet when the glans is titulated with a warm hand, there is an evident swelling. He declares, however, that he has neither inclination for venery nor emission of semen. But, as he has testicles and distinct vasa deferentia, it is probable that they terminate in the rectum, and that the semen is discharged with the foeces.

The fungous excrescence seems to have been the original passage for the umbilical vessels; and its low situation is probably owing to the want of a vesica urinaria, by which the umbilical arteries are supported and directed to the umbilicus in a natural state. That the vesica urinaria is wanting, is proved by the constant and involuntary flow of urine, by the want of an urethra, and by the introduction of a probe at the openings from whence the urine is discharged, which are evidently the orifices or terminations of the ureters. The excrescence would probably have skinned over, had it not been for the constant distillation of urine excoriating the parts.

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His small quantity of beard may probably be owing to the small size of his testicles, but chiefly to the want of vesiculæ seminales. By this means, there can be little stagnation of semen, and consequently little absorption of it, to which it is probable that the growth of the beard is principally to be attributed.

As he goes about shewing himself for money, he endeavours to persuade ignorant people that he has a regular menstruation. But he has not the least mark of female about him; and, if blood at any time appears, it probably comes from the excoriated parts, as there is no perforation externally but for the ureters and rectum.

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Extract of a Letter from Dr Percival at Manchester, to Dr Duncan at Edinburgh.

“ An eminent philosopher informed me, some time ago, that the solvent power of air on water is a discovery of a much older date than is commonly supposed; and that it was well known to Dr Edmund Halley about the beginning of the present century. The following quotation, which I have extracted from the second volume of Lowthorp’s abridgement of the philosophical transactions, will sufficiently evince the truth of this assertion.

“ Vapours

“ Vapours being raised by warmth, let us, for a first supposition, put, that the whole surface of the whole globe were all water very deep, or rather that the whole body of the earth were water, and that the sun had his diurnal course about it; I take it, that it would follow, that the air of itself would imbibe a certain quantity of aqueous vapours, and retain them like salts dissolved in water; that the sun warming the air, and drawing a more plentiful vapour from the water in the day-time, the air would sustain a greater proportion of vapours, as warm water will hold more dissolved salts, which, upon the absence of the sun, in the nights, would be all again discharged in dews, analogous to the precipitation of salts in the cooling of liquors.

Vid. *Lowthorp's abridg. of Phil. Tran. vol. II.*
p. 127.

“ Dr Priestley continues to prosecute his experiments on various kinds of air, and has discovered, by means of a burning lens, that several metals, without any acid, yield inflammable air; and that fixed air is discharged from alum. The air contained in the bladders of fishes, he finds to be thoroughly noxious; a fact which has sugge-

sted to him a very interesting train of experiments."

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An asylum or lock-hospital, for the reception of female patients labouring under the venereal disease, has been lately established at Manchester, and we wish so laudable an example may be followed in other places. To shew the utility of such institutions, and to obviate the objections which have been made to them, we shall insert the following advertisement, written by Dr Percival, and prefixed to the report of the hospital above mentioned.

A D V E R T I S E M E N T.

Whoever reflects on the variety of diseases to which the human body is incident, will find, with concern, that a considerable part of them are derived from immoderate passions, and vitious indulgence. Sloth, intemperance, and irregular desires are the great sources of evil, which contract the duration, and imbitter the enjoyment of life.

But humanity, while she mourns over the vices of mankind, incites us to alleviate the miseries which flow from them. The private hand of charity is never shut, when sickness, complicated with poverty, presents itself; and hospitals are established in every part of the kingdom for the reception of the wretched, whether innocent or guilty.

A new institution, founded on these benevolent principles, consonant to sound policy, and favourable to the interests of virtue, now claims the attention and encouragement of the public. The object of it is to provide relief for a loathsome and painful distemper, often fatal when neglected; but which admits of an almost certain cure, when the patient is under confinement, and subject to proper regulations. This asylum, it may reasonably be hoped, will withdraw from their haunts those wretches who seduce unwary youth, contaminate them with disease, spread wide infection, and entail shame and misery on a feeble posterity. To the penitent sufferers, it will afford a pleasing refuge; will give opportunity to confirm their wavering resolutions; and will restore them to health, to peace, and usefulness. Happy will the governors be, in dismissing such with this injunction: *Go, and sin no more.*

Proposals have been circulated for publishing, by subscription, at London, An Illustration of the Materia Medica, by elegant engravings, coloured after nature, of the more rare articles used in medicine, as well exotic as indigenous. It is expected that this work will be compleated in fifty numbers, each containing two folio plates and one sheet of letter-press, price 4 s.

Dr Hunter's plates of the gravid uterus are now advertised to be published in November next.

At a meeting of the royal college of physicians in Edinburgh, on the second of August 1774, Dr Nathan Spens, and Dr Robert Hunter, both of Edinburgh, were elected fellows of the college.

On the fourteenth of January 1774, Lucas Pepys, M. B. Physician to the Middlesex's hospital, and John Burges, M. B. physician to St George's hospital, were admitted to the degree of doctor of medicine; and, on the 9th of July 1774, Charles Cameron, A. M. was admitted to the degree of batchelor of medicine, by the university of Oxford.

On

On the second of October 1773, Christianus Ludovicus Willich, eminent for his knowledge in natural history and botany, died at Gottingen; and, on the fourth of April 1774, Dr Oliver Goldsmith, whose literary character is well known to most of our readers, died at London.

Ff 3

S E C T.

S E C T. IV.

List of New Books,

Philosophical transactions, giving some account of the present undertakings, studies, and labours of the ingenious, in many considerable parts of the world. Vol. LXIV. part I. 4to, London.

An Essay on the most effectual means of preserving the health of seamen in the royal navy; and a dissertation on fevers and infection: Together with observations on the jail-distemper, and the proper methods of preventing and stopping its infection. By James Lind, M. D. 8vo, London.

Observations on Dr Williams's treatise upon the gout. By Mr Daniel Smith, author of a letter to Dr Cadogan, with remarks on the same subject, 8vo, London.

Horti

Horti Malabarici pars prima, de varii generis arboribus et fructicibus filiquosis; Latinis, Malabaricis, Arabicis, Brachmanum characteribus nominibusque expressis, adjecta florum, fructuum, feminumque vera delineatione, colorum viriumque accurata descriptione, adornata per nobilissimum ac generosissimum D. D. Henricum van Rhede Tot. Draakestein, Toparcham in Mydrecht, quondam Malabarici regni gubernatorem, supremi confessus apud Indos Belgas senatorem extraordinarium, nunc vero equestris ordinis illustribus ac praepotentibus provinciae Ultrajectinae proceribus adscriptum, et Theodorum Sanfon ab Almelooven M. D. Notis auxit et commentariis illustravit Joannes Commelinus. Nunc primum classium, generum, et specierum characteres Linnaeanas, synonyma auctorum atque observationes addidit, et indice Linnaeano adauxit, Joannes Hill, M. D. academiae imperialis naturae curiosorum Dioscorides quartus, 4to, London.

Observations and experiments on the poison of copper. By William Falconer, M. D. F. R. S. 12mo, London.

An oration delivered before the American philosophical society, held at Philadelphia, February 4th 1774; containing an inquiry into the natural

history of medicine among the Indians in North-America; with a comparative view of their diseases and remedies with those of civilized nations. With an appendix, containing proofs and illustrations.

De la connoissance et du traitement des maladies, principalement des aigues; ouvrage fondé sur l'observation. Traduit du Latin de M. Eller, premier medecin du Roi de Prusse, par M. J. Agathange le Roi, M. D. medecin de M. le Comte de Provence, &c. 12mo, Paris.

Observations et experiences sur le charbon malin, avec un methode assurée de le guerir. Par M. Fournier, M. D. de la faculté de Montpellier, medecin pensionné de la ville de Dijon, et medecin des etats-generaux du duché de Bourgogne, 8vo, Dijon.

Tableau de l'analyse chymique, ou procédés du cours de chymie de M. Rouelle, apothecaire de S. A. S. Monseigneur le Duc d'Orleans, demonstrateur de chymie au jardin royal des plantes de la société des arts de Londres, et de l'académie électorale d'Erfort, 8vo, Paris.

Memoires pour servir à l'histoire des insectes. Par M. Reaumur, 6 vols, 4to. avec 267 figures; nouvelle

nouvelle édition, proposés par souscription.
Paris.

Histoire des plantes de la Guiane Française, rangées suivant la méthode sexuelle. Par M. Fusée Aublet ; où se trouve la description et les figures de 400 plantes, qui n'avoient point encore été décrites ni gravées, proposé par souscription, 3 vols 4to, Paris.

Dictionnaire raisonné universel de matière médicale. Par feu M. de la Beyrie, M. D. revu et mis en ordre par M. Goulin ; avec pres de 800 figures, dessinées par M. de Garjault, et gravées par les plus habiles maîtres, proposé par souscription, 8 vols, 8vo, Paris.

Tableau du produit des affinités chimiques, grande feuille gravée, dédiée à M. de la Maignon de Maleherbes. Par le Sieur Fourcy apothecaire, Paris.

Traité de l'expérience en général, et principalement dans l'art de guérir. Par M. Zimmermann, M. D. traduit de l'Allemande par M. le Febure, 12mo, Paris.

Manuel anti-syphillitique, ou essai sur les maladies veneriennes ; ouvrage fondé sur l'expérience et

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Manuel anti-syphilitique, ou essai sur les maladies veneriennes ; ouvrage fondé sur l'expérience
et

et l'observation, et redigé d'apres les principes des plus grands medecins, avec un preservatif de ces maladies. Par M. de Cezan, docteur regent de la faculté de medecine en l'université de Paris, 12mo, Paris.

Medecine pratique de Sydenham, avec des notes; ouvrage traduit en François sur la derniere édition Angloise, par feu M. A. F. Jault, M. D. et professeur au college royal. 8vo, Paris.

Physica specimina. 8vo, Milan.

Gerhards Beyfugung, &c. i. e. Additions to Chemistry and natural history, part. 1. By Charles Abraham-Gerard, M. D. Berlin.

Abhandlung von der aufzieheng des grauen staars, &c. i. e. A treatise on the extraction of the cataract. By M. Aug. Richter, M. D. Gottingen.

J. Brambilla chirurgische practische abhandlung, i. e. A treatise of practical surgery by John Brambilla, Vienna.

Naturalis philosophiae elementa, in libros duos distributa, ad usum auditorum suorum collecta a D. Joanne Alberto ab Colombo, in Patavino gymnasio

gymnasio publico primario philosophiae professore,
2 vols, 8vo, Paris.

Opuscles physiques et chymiques. Par M.
Lavoisier de l'académie royale des sciences, 8vo,
Padua.

Traité de météorologie, contenant, 1. L'histoire des observations météorologiques : 2. Un traité des météores : 3. L'histoire et la description du baromètre, du thermomètre, et des autres instrumens météorologiques : 5. Les tables des observations météorologiques, et Botanico-météorologiques : 5. Les resultats des tables et des observations : 6. La méthode pour faire les observations météorologiques. Par le Pere Cotte, Prêtre de l'oratoire et Curé de Montmorenci, 4to, Paris.

Traité sur le scorbut, traduit du Latin de M. Meitleur, medecin de Montpellier. Par M. Girand, medecin de Befançon. Paris.

Eloge historique de Jean-Frederic Meyer, auteur des essais de chymie sur la chaux vive, le feu, &c. Par M. Dreux, apothecaire gagnant maîtrise de l'hotel royal des invalides. Paris.

Dissertationes

Differtationes medicae, quas ex auctoritate reverendi admodum viri Gulielmi Robertson, SS. T. P. Academiae Edinburgenae praefecti; nec non amplissimi senatus academici consensu et nobilissimae facultatis medicae decreto; pro gradu doctoratus, summisque in medicina honoribus et privilegiis rite et legitime consequendis, eruditorum examini subjecerunt,

Jacobus Hendy, Barbadoensis, De secretione glandulari.

Joannes Gilchrist, Britannus, De febre anomala inter Dumfrienses epidemica, anno 1767.

Gulielmus Harvey, Hibernus, De venenis.

Joannes Henderson, Britannus, De phthisi pulmonali.

Daniel Daly, Hibernus, De menorrhagia in non gravidis nec puerperis.

Joannes Sims, Anglus, De usu aquae frigidae interno.

Thomas Sanden, Britannus, De atmosphaerae natura et effectibus quibusdam.

Jacobus

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